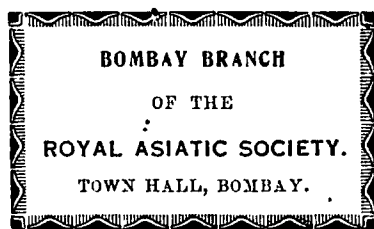




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MINISTRY OF HEALTH
DEPARTMENT OF HEALTH FOR SCOTLAND

REPORT OF THE
INTER-DEPARTMENTAL
COMMITTEE ON
MEDICAL SCHOOLS

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1944

MINISTRY OF HEALTH .
DEPARTMENT OF HEALTH FOR SCOTLAND

**REPORT OF THE INTER-DEPARTMENTAL
COMMITTEE ON MEDICAL SCHOOLS**

MEMBERS.

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Sir JOHN STOPFORD, M.D., D.Sc., F.R.C.P., F.R.S. (Vice-Chairman).
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The estimated cost of the preparation of this report (including the expenses of the Committee) is £2,158 8s. 1d., of which £396 3s. 10d. represents the estimated cost of the printing and publishing of this report.

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REPORT OF THE INTER-DEPARTMENTAL . COMMITTEE ON MEDICAL SCHOOLS

To the Rt. Hon. HENRY WILLINK, K.C., M.C., M.P., Minister of Health,
and the Rt. Hon. THOMAS JOHNSTON, M.P., His Majesty's Secretary of
State for Scotland.

SIRS,

PREAMBLE.

1. We have completed the enquiry for which we were appointed in March, 1942, and have now the honour to submit our report.

TERMS OF REFERENCE.

2. Our terms of reference were as follows:—

“ Having regard to the statement made by the Minister of Health in the House of Commons on 9th October, 1941, indicating the Government's post-war hospital policy, to enquire into the organization of Medical Schools, particularly in regard to facilities for clinical teaching and research, and to make recommendations.”

3. In a letter dated 7th April, 1942, we were informed that these terms of reference had been drafted “ to enable full consideration to be given to any question affecting the organization of medical teaching and its relation to the Universities on the one hand and to the hospitals on the other.” This letter also directed our attention to certain problems which it was desired we should specially examine. Two of these problems were mainly concerned with the provision of medical education in London; they were, first, the organization of pre-clinical teaching and second, the possible amalgamation of some of the smaller clinical schools, since their continued existence as independent and completely self-contained units might no longer be necessary or desirable in any scheme for the co-ordination of hospitals in the London area. The remaining problems arose on a national scale in the light of the future organization of hospital services; they were the appointment and payment of teaching staff, the provision of an adequate range and variety of clinical material and of suitable laboratory accommodation and equipment for teaching and research, and, lastly, the arrangements for post-graduate teaching and research.

PROCEDURE.

4. We have met regularly since the time of our appointment, and in all have held fifty meetings, some of which have extended over more than one day. At thirty-four meetings we have heard oral evidence; two of these meetings, each lasting several days, were held in Scotland.

5. At the outset of our enquiry we realized the need for complete and accurate information about the arrangements for medical education which existed immediately before the outbreak of war, and about any significant changes which had had to be made to meet war-time conditions. We therefore invited all the medical schools to reply to a somewhat formidable questionnaire. The cordial response from the authorities and officers of the schools, a response which we appreciated the more because we knew the heavy burdens which the war had placed on their shoulders, enabled us to compile a comprehensive account of the diverse conditions in the various schools. This information has proved invaluable to us in our deliberations.

6. We considered it desirable to obtain as wide a conspectus of opinion as possible and accordingly invited and received evidence, both written

and oral, from a large number of organizations and also from many individuals who were specially qualified to give helpful information and advice. The organizations included the universities and medical schools, the General Medical Council; the Royal Medical Colleges and other bodies representing the various branches of the medical profession and medical students; the Medical Research Council; the London County Council and the organizations representing the major local authorities of Great Britain; the organizations representative of the voluntary teaching hospitals. In addition, we have had informal discussions with the Chairman of the University Grants Committee, with representatives of the Hefherington Committee appointed to consider the post-war hospital problems in Scotland and with a representative of the Asquith Commission on Higher Education in the Colonies. A list of the persons and bodies who supplied us with memoranda, and of the witnesses who appeared before us, is given in Appendix P.

7. To all those who have assisted us we desire to express our great indebtedness and cordial thanks.

8. The surprisingly large measure of agreement that has been disclosed regarding the lines of future development has greatly assisted us in the framing of our recommendations. These recommendations constitute a programme for a term of years. We can claim for this programme the support of the vast majority of those who are responsible for and engaged in medical education and research in all parts of Great Britain. The proposed changes are evolutionary in character; we believe that they would be far-reaching in results. Some could be introduced while the war is still in progress; others are dependent upon the reorganization of hospital services after the war; some cannot mature fully for a number of years. All should be introduced at the earliest possible moment, since many of the schemes for reconstruction after the war will be dependent for their ultimate success upon a sufficiency in quality, training, outlook, and number of recruits to the medical profession, upon an improved system of undergraduate and post-graduate medical education, and upon the further development of medical research.

DEFINITIONS.

9. It is desirable that at the outset we should define certain terms which we shall have occasion to use frequently in our report. By "**undergraduate medical education**" or "**undergraduate course of training**," we mean the educational requirements which a student has to fulfil to qualify for registration as a medical practitioner (i.e., to be admitted to the Medical Register maintained by the General Medical Council in accordance with the Medical Acts). Under existing conditions, this course of training is in three main parts, usually referred to as pre-medical, pre-clinical, and clinical. When we refer to the undergraduate course of training we have in mind these three parts and *also* a compulsory period of junior house-appointments in hospitals, which, we recommend, should be held by every student between the passing of the final qualifying examination and admission to the Medical Register. The pre-medical part of the course consists of elementary training in biology, chemistry, and physics, and under present regulations has to be completed before a start is made on the "medical curriculum proper." The pre-clinical is the first part of the "medical curriculum proper" and is concerned mainly with the study of scientific subjects, principally anatomy and physiology, which are fundamental to medical thought and practice. The clinical part consists in the main of clinical studies in approved hospitals. "**Post-graduate medical education**" covers all forms of organized training and experience designed to advance the knowledge of those who are already

registered medical practitioners. It includes arrangements for the training of medical practitioners who intend to become specialists, as well as refresher courses for general practitioners and others.

10. "**An undergraduate medical student**," sometimes referred to as a "**medical student**" or "**undergraduate student**," is any man or woman who is taking the undergraduate course of training and has not been admitted to the Medical Register. Incidentally we should mention that, unless the contrary is apparent from the context, any references to male practitioners or students are intended to apply equally to women doctors and students.

11. The term "**medical school**" has been used to cover all types of educational institutions that cater for undergraduate medical students by providing the whole or part of the training that constitutes the "medical curriculum proper." In some cases the term applies to the faculty of Medicine of a university, in others to a college or school of a university. It also applies to institutions that are not parts of universities. But it is not applicable to institutions which give courses in the pre-medical subjects but not in subjects coming within the "medical curriculum proper." When referring to a "**university medical school**" we have in mind a faculty of Medicine, college or school of a university; such college or school need not be concerned solely with medical students. The term "**non-university medical school**" or "**extra-mural school**" refers to a medical school that is not an integral part of a university.

12. Whereas, in addition to training undergraduate students, all medical schools will take part in some form of post-graduate medical education, in most cases in connexion only with the training of future specialists, there are and will continue to be educational institutions and hospitals concerned solely with post-graduate medical education. The terms "**post-graduate medical school**," "**post-graduate institute**" and "**post-graduate hospital**" have been used for institutions in this group.

13. Our use of the expression "**teaching hospital**" is wider than is customary. We apply it to any hospital to which a medical school is allowed access for the clinical training of its students. We have regarded these hospitals as of two types:—(i) the parent teaching hospital (which is the hospital most closely associated with a medical school, and in which the major part of the students' clinical training will normally be provided) and (ii) the associated teaching hospital. It has been customary to apply the term "**teaching hospital**" only to those hospitals which we have called parent teaching hospitals. These hospitals are the leading voluntary general hospitals in the various centres of medical education:—the Royal Infirmaries and Royal Hospitals in the university centres in Scotland, the English provinces and Wales; and in London the voluntary hospitals which have medical schools attached to them, such as St. Bartholomew's Hospital, St. Thomas's Hospital, Guy's Hospital and the London Hospital. Our use of the term "**teaching hospital**" in a wider sense, arises from our belief that, to provide adequately for the training of undergraduate medical students in future, it will be necessary to organize on the basis of **medical teaching centres**, each consisting of a university medical school, a parent teaching hospital (or hospitals), associated teaching hospitals, and clinics of various kinds, all so related in administration, policy and activities that in the field of medical education and research they work as a unity.

14. All references to the normal practice are references to the immediate pre-war period, even if described as existing now. Temporary war-time measures have, for the most part, been ignored, but when any reference has been made to what is a war-time practice, this has been made clear in the context.

GENERAL COMMENTS ON THE RELATION OF MEDICAL EDUCATION TO A NATIONAL HEALTH SERVICE.

15. Our terms of reference directed that we should have regard to the outline of the post-war hospital policy of the Government, contained in the statement of the Minister of Health in the House of Commons in October, 1941. The four main proposals were as follows:—(i) that the major local authorities should be made responsible by statute for providing, in partnership with the voluntary hospitals, an adequate hospital service; (ii) that the schemes for hospital co-ordination should be for areas substantially larger than those of individual local authorities; (iii) that any additional expenditure of the major local authorities in providing and maintaining an adequate hospital service would be assisted by Exchequer grants; and (iv) that special arrangements should be made “for dealing with the teaching hospitals by way of increased educational grants”.

16. In addition to the implications and application of these proposals, we have taken account of various later Government statements on the future development of the hospital and medical services, and especially the proposals contained in the White Paper* on “A National Health Service.”

17. At this early stage we wish to make four general comments on medical education and its relation to a national health service. Our intention is to draw attention to:—(i) the dependence of a national health service on medical education; (ii) the effect of making the promotion of health a principal objective of the health service and of medical education; (iii) the slow maturing of the necessary educational reforms; and (iv) the assistance from public funds that will be needed for medical education.

The dependence of a national health service on medical education.

18. Properly planned and carefully conducted medical education is *the* essential foundation of a comprehensive health service. If such a service is to have continuing vitality it must be founded on highly developed and vigorous systems of general and professional education for members of the medical and allied professions, and it must evoke the enthusiastic and intelligent co-operation of the general public. The spirit of education must permeate the whole of the health service, and that service must be so designed and conducted that, among other things, it secures for medical education the necessary staff, accommodation, equipment and facilities. Medical education cannot be regarded as merely incidental to the hospital service.

19. We think it is advisable to stress the dependence of a successful health service on medical education, partly because current discussions show signs of a tendency to concentrate prematurely on the detailed structure of such a service to the neglect of its essential foundation, and partly because problems of medical education and research are not the exclusive concern of the medical schools and the medical profession. They are of vital importance to the nation, and the general public should maintain a lively and understanding interest in them. Indeed, the nature and results of the arrangements made for training medical practitioners, and for increasing their knowledge and skill after qualification, can be rightly judged only in relation to the individual and collective needs and well-being of the public.

The effect of making the promotion of health a principal objective of the health service and of medical education.

20. Our second comment concerns the application of this criterion to the promotion of health. For some years there has been a growing acceptance

* Cmd. 6502. February 1944.

of the view that one of the principal aims of national policy should be to secure for everyone the highest possible standard of physical and mental health. The achievement of this aim would establish a nation whose citizens were of good heart to enjoy the present and to confront their problems and difficulties with determined zest. By becoming advisers on health both to individuals and to the community, medical practitioners will have to bear much of the responsibility for ensuring this result and, by means of undergraduate and post-graduate training, must be provided with the knowledge and guidance necessary to enable them to carry out this important work. The present system of medical education is seriously deficient in this respect. To the neglect of the promotion of health, medical practice—and consequently medical education—has been concerned primarily with disease, chiefly as it affects individuals. A radical reorientation of medical education and practice is essential, and we believe that both medical practitioners and medical students are ready for it. As Lord Dawson of Penn said in the House of Lords on 24th February, 1943, "It is our united desire to put health and its furtherance in the primary position, not only in the curriculum, but in the daily practice of the profession".

21. One of our basic proposals is that throughout undergraduate and post-graduate education, emphasis must be placed on the acquisition of a sound knowledge of all measures that may make and preserve a healthy nation; that these measures must be regarded as part of the concept of Medicine, and that they should be the subject of wide and intensive research. Our views on the preliminary steps to be taken are set out later, mainly in the sections on social medicine.

The slow maturing* of the necessary educational reforms.

22. Third, we wish to draw attention to the time that must necessarily elapse before changes made in the system of medical education to meet the requirements of a comprehensive health service can become fully effective. Their maturing is bound to be slow, whether they relate to improvements in the nature of the training or to the number of students for whom provision is made.

23. Many of the reforms now necessary depend upon a change of outlook on the part of teachers and examiners and upon the development of new teaching methods. In some branches of Medicine there is a dearth of teachers, due in some cases to economic causes and in others to the fact that these branches, though recognized as fundamentally important if health is the objective, are still in their infancy. Good teachers cannot be produced quickly. Further, if the training is to be maintained at a proper standard, a substantial increase in the medical profession's pre-war rate of growth cannot be effected rapidly.

24. It is important that those responsible for planning a comprehensive health service should fully appreciate these facts and make their plans accordingly. The medical schools should regard themselves as under a definite obligation to do all in their power to meet the need for more doctors, but they should avoid any premature increase in the number of medical students inconsistent with the maintenance of a proper standard of training. To sacrifice the standard of training in any way would be gravely detrimental to the future vitality and success of the health service.

25. With a view to shortening the inevitable time-lag between the initiation of educational reforms and their fruition, we urge that, at the earliest possible date, action should be taken on three matters. They are:—

(i) The building up of an adequate supply of teachers. Many departments of the medical schools were under-staffed before the war. In respect

of those branches of medicine in which there is a dearth of teachers, it will be desirable to place the medical schools in a position to provide promising young practitioners with the opportunities and means of obtaining, at home or abroad, the experience necessary to fit them for these posts. Further, since teachers are the basis of both undergraduate and post-graduate education, those practitioners who have been, or who are qualified to become, teachers in the medical schools, and who are now serving with H.M. Forces, should be among the first medical officers to be demobilized.

(ii) The granting to medical schools of the financial and other assistance (including priorities for building materials and labour) necessary to enable them to provide the staff, accommodation and equipment that will be needed.

(iii) The provision of suitable post-graduate courses for existing practitioners.

11 The assistance from public funds for medical education.

26. If medical education and research in Great Britain are to form a sound foundation for the national health service, the medical schools, post-graduate institutions and hospitals concerned will have to be given greatly increased financial support from public funds. Including the outlay of teaching hospitals on facilities for teaching and research, the total of capital expenditure that should be incurred may, within 10 years, amount to £10,000,000, at pre-war costs. In addition, the amount of recurrent grants will have to be increased yearly from £700,000 a year, the approximate amount before the war, until within 10 years the amount reaches between £3,000,000 and £4,000,000 a year at pre-war values. At this level the recurrent grants would represent about 2 per cent. of the estimated cost in the first year of the national health service. The need for increased expenditure is to remedy defects in the present arrangements, to provide for more medical students and to develop post-graduate education and research. We are confident that the sums named will be regarded as a reasonable price for the community to pay for a service vital to the promotion of national health.

GENERAL SUMMARY OF REPORT.

PART I—UNDERGRADUATE MEDICAL EDUCATION.

GENERAL OBJECTIVES.

(1) Although the nation is justified in taking pride in the reputation of British medical practice and of traditional British methods of education, there is an urgent need for radical improvements.

(2) The individual freedom enjoyed by medical schools in academic matters is an asset that must be fully preserved.

(3) The aim of undergraduate medical education must be to guide medical students to such development of mind and character as will enable them when qualified to give maximum service to the community. It must help a student to acquire a scientific foundation for his professional work, a proper outlook on the promotion of mental and bodily health, an adequate knowledge of disease, a sympathetic understanding of people and their environment, a sound judgement and the ability to observe accurately, reason logically, and assess the claims of new knowledge.

(4) The heart of the system of medical education is an active partnership of students, teachers and the general public. Of prime importance in the proper functioning of this partnership are the qualities of mind and character of students and teachers, their mutual attitude, and the collaboration they receive from members of the general public.

(5) The undergraduate training should fulfil the following principles:—

(a) By its nature and standard the training should provide the student with a university education on broad and liberal lines.

(b) The essential unity of Medicine should be observed throughout and the teaching in the various stages and subjects so organized that the whole becomes a smooth and logical development.

(c) While primarily practical in character, the training should give students a clear understanding of the constantly developing scientific basis of Medicine.

(d) The main emphasis should be on the inculcation of fundamental principles and methods rather than on the implanting of a mass of purely factual knowledge.

(e) The type of instruction and the relative importance attached to various subjects should have a definite bias towards the needs of the future general practitioner.

(6) Adequate accommodation, suitable equipment and satisfactory arrangements for medical teaching and research are required. Many deficiencies must be remedied.

(7) Improvements in the organization of medical schools and teaching hospitals must be accompanied by a thorough overhaul of the medical curriculum. Reforms in the course of training will be largely sterile unless the system of examinations is made to conform.

[Chapter 1.]

UNIT OF ORGANIZATION.

(1) The unit of organization for the national system of undergraduate medical education should be a medical teaching centre, consisting of a university medical school, a group of teaching hospitals (parent and associated) in as close proximity as possible to the medical school, and such clinics of the health service of the district as should be used for teaching purposes.

(2) While the governing body of each constituent institution of a teaching centre retains full authority in its own field of responsibility, the policy, administration and activities of the constituent parts should be so interrelated that the institutions function as one in the field of medical education and research.

[Chapter 2, paragraphs 1-2.]

MEDICAL SCHOOLS.

(1) The training of medical students on modern lines can be properly conducted only under the aegis of a university and in institutions that conform to university standards in respect of staffing, accommodation, equipment and other arrangements.

(2) Every medical school should be a university medical school in the sense that it is an integral part (i.e. a faculty, college or school) of a university. This principle should apply to existing schools and to any new schools it may be found expedient to establish.

(3) It will be a natural step in the evolutionary development of medical education in this country thus to concentrate the training of medical students in the hands of university medical schools. Of the thirty medical schools in Great Britain, all but four are university medical schools.

[Chapter 2, paragraphs 3-12.]

(4) From the point of view of medical education, changes are not necessary in the system of government of the university medical schools in the English

provinces, Wales and Scotland, except that the governing bodies of the teaching hospitals should, where they do not at present enjoy it, be granted representation in the government of the medical schools.

[Chapter 2, paragraphs 13-15.]

(5) In order that the medical schools in London may have opportunities for future development equal to those which teaching centres in other parts of the country may be expected to enjoy, it is necessary (i) for the undergraduate medical schools of the University of London to become incorporated as separate legal entities and (ii) for the University and its medical schools to take all possible steps to make their associations closer, more active and mutually more advantageous. Though legally and financially separate and each under the direction of its own governing body, in administration and activities the medical school and its parent teaching hospital would continue to be closely linked. The University of London should be represented on the governing bodies of the medical schools. In the forging of closer ties both the University and the medical schools have contributions to make.

[Chapter 2, paragraphs 16-37.]

(6) Although they did good work in time past, the three extra-mural schools in Scotland cannot meet the modern requirements of medical education efficiently. They cannot be made the equals of university medical schools and their continued existence will prove an obstacle to the development in Edinburgh and Glasgow of properly organized medical teaching centres. It is recommended that they should cease to train medical students.

[Chapter 2, paragraphs 38-64.]

(7) It is very doubtful whether an increase in the number of medical schools of the University of London will be justified, and the conclusion has been reached that the West London Hospital Medical School should not continue, beyond possibly the next four or five years, to train undergraduate medical students.

[Chapter 2, paragraphs 65-71.]

(8) Experience has proved the value of the dean of a medical school having academic interests and some share in the current educational work of the school; but it is doubtful whether in future a dean will be able to combine that office with the headship of a large teaching department. Probably it will be advantageous for most of the schools to make the office of dean a whole-time, or almost whole-time, appointment carrying adequate salary.

[Chapter 2, paragraphs 72-81.]

TEACHING HOSPITALS:

(1) The interests of both patients and students are served if, in the framing of policy and the conduct of the hospital's affairs, the two functions of a teaching hospital, namely the care of patients and the furtherance of teaching and research, receive equal emphasis, being regarded as complementary and mutually re-enforcing.

(2) In most teaching hospitals the needs of medical education have not received such emphasis. Those responsible for medical education have not had sufficient voice in the policy or management of teaching hospitals and medical education has suffered.

[Chapter 3, paragraphs 1-5.]

(3) With a view to preventing the recurrence of past difficulties it has been suggested that parent teaching hospitals should become "university" hospitals. This proposal is not endorsed because (i) legal and financial independence is regarded as being in the best interests of both medical school and teaching hospital, and (ii) it is believed that medical schools can be placed in a position to exercise effective control over all stages of the course of training by changes that are less radical and are likely to be generally acceptable.

[Chapter 3, paragraphs 6-11.]

(4) The governing body of a medical school should have a reasonable number of representatives on the governing body of its parent teaching hospital. It is desirable, though not so important in most teaching centres, that the medical school should also be represented on the governing bodies of its associated teaching hospitals. In London the representation of the educational interests on the governing body of each parent teaching hospital should include, in addition to those members appointed by the governing body of the medical school, one or two members appointed by the University Senate.

(5) An exchange of representatives between the governing bodies of the parent and associated teaching hospitals is to be encouraged.

(6) If a parent teaching hospital is to function efficiently as an institution for medical education, certain administrative conditions must be satisfied. The governing body must be personal to the hospital. The full members of the medical staff should have complete individual responsibility for the clinical management of their patients. The advice sought by the governing body on medical matters should be that of the medical staff as a whole, expressed through a medical committee or board of active members of the staff. If the hospital has a medical superintendent, he should not have executive powers in respect of the clinical management of patients, except in so far as such powers may be delegated to him on the advice of the medical staff of the hospital.

(7) It is important (i) that a common advisory machinery should be used by all parts of a medical teaching centre for the selection of members of the medical staff, other than those in the junior grades, and (ii) that grants from public funds for the educational work of the teaching centre should be received through university channels

[Chapter 3, paragraphs 12-21.]

FACILITIES FOR CLINICAL INSTRUCTION.

(1) The number and variety of patients in the wards and out-patient departments of the teaching hospitals should be adequate to provide the students with such clinical experience in the various branches of Medicine as accords, in nature and breadth, with the aims of undergraduate training. The attainment of adequacy in this respect should be the main consideration determining the number of teaching hospitals required in any centre.

(2) Excluding beds for tuberculosis, acute infectious diseases, mental diseases, and any highly specialized service, a medical school admitting 100 students a year to the clinical part of the course (such an entry is likely to provide the optimum size for most schools in future) should have access to between 950 to 1,000 hospital beds.

(3) In addition to access to beds, a medical school requires access to properly staffed, well-equipped and well-housed out-patient departments, laboratories and clinics. It should also be connected with rehabilitation and vocational training centres.

[Chapter 3, paragraphs 22-30.]

(4) Medical schools will have to continue to depend on groups of hospitals for clinical teaching facilities. Invariably local authority special hospitals (e.g. for infectious diseases and mental diseases) will be included in the teaching centre. Whether general hospitals of local authorities are included must be settled by local resources, needs and circumstances; but as a rule the inclusion of one or more of these hospitals will be very beneficial in securing a comprehensive range of teaching resources, provided that they are suitably situated, administered, staffed and equipped and are full partners in the teaching centre.

(5) Ideally, the medical school, the teaching hospitals and such clinics as are used for teaching purposes should be situated on the same or adjacent sites so that the teaching centre is a compact geographical unit. The development of such centres is an attainable objective in course of time.

(6) In view of the importance of medical education to the health service, the authorities responsible for planning the hospital service in any area in which a medical school is situated should be placed under an obligation to assist the building up of medical teaching centres as compact geographical units to the fullest extent that existing hospital provision and unsatisfied hospital needs will allow.

(7) In all cases the interim arrangements should approximate as closely to the ideal as local conditions permit, and should provide that the teaching hospitals of various types form a closely-knit group, are complementary to each other for teaching purposes, are few in number and are situated as close to one another and to the medical school as possible. Recognition that each hospital is a full partner in the teaching work should underlie the staffing plan and the selection of staff.

[Chapter 3, paragraphs 31-39.]

(8) The group of teaching hospitals associated with a medical school must include at least one parent teaching hospital which forms the focus of the arrangements for clinical instruction. The scale of the teaching accommodation and equipment in this hospital will be greater than in associated teaching hospitals. The admission of patients to it must be selective and controlled in the interests of teaching.

(9) Whether a parent teaching hospital is a voluntary hospital or is maintained by a local authority is not a question of first importance. The vital matter is that it should satisfy the various conditions essential for the furtherance of teaching and research.

[Chapter 3, paragraphs 40-41.]

(10) Apart from linkage of governing bodies and the adoption of common machinery for the selection of staff, other measures implied in the conception of a medical teaching centre include:—

(a) Any person who teaches medical students, whether he is on the staff of the parent teaching hospital or of an associated teaching hospital, shall be a member of the staff of the medical school.

(b) The teaching work shall be so distributed among the parent and associated teaching hospitals as to utilize the clinical resources to the best advantage for educational purposes.

(c) Suitable arrangements shall be made for ensuring continuity of teaching in the medical school and the various hospitals.

(d) A proportion of the medical staff shall hold appointments at more than one hospital of the teaching centre.

(e) (Though not essential) the various hospitals shall use a common organization for the admission of patients or shall conform to an agreed policy with regard thereto.

[Chapter 3, paragraph 42.]

MEDICAL TEACHING CENTRES AND THE HEALTH SERVICE.

(1) All practicable means should be sought to bring every hospital into association, directly or indirectly, with a medical teaching centre. The spirit of education must permeate the whole service.

(2) Although they will be available for consultation and advice, specialists on the staffs of teaching hospitals, and particularly parent teaching hospitals, will not as a rule be able to undertake regular duties in non-teaching hospitals if they are to perform properly their clinical and educational duties in the teaching hospitals. The association of non-teaching hospitals with teaching centres must be brought about by other means.

[Chapter 3, paragraphs 43-47.]

(3) Educational associations can and should be developed between a medical teaching centre and all the major hospitals in a wide area around the centre (i.e. in the centre's "zone of influence"). If these major non-teaching hospitals are linked by means of their specialists with outlying "general practitioner" hospitals there will be a measure of contact between the centre and all hospitals in its zone of influence.

(4) These associations will not be formal; they will evolve in part out of the arrangements made in respect of pre-registration house-appointments and in part out of the provision for refresher courses for general practitioners, hospital appointments for intending specialists and other forms of post-graduate education. [See also relevant sections of this summary.]

(5) To help the hospital service generally and to facilitate a better distribution of specialists, medical teaching centres should make it an established principle that tenure of an appointment in a non-teaching hospital is regarded as a qualification in favour of an applicant for appointment to a teaching hospital.

[Chapter 3, paragraphs 48-51.]

(6) The staffs of the pathological departments of a medical teaching centre should not assume direct or indirect responsibility for the routine work of the public health bacteriological service or the general pathological laboratory service. It is desirable however that the main area or regional laboratory for each service should be situated in close proximity to the pathology laboratories of the teaching centre and that the staff of the latter should be available for consultation and advice when desired.

(7) Most of the training of pathologists for the public health bacteriological and the general pathological laboratory service should be given in the teaching centres. Further, either a regular interchange of staff should be arranged between the teaching centres and the two services, or the staffs of the latter should have the opportunity from time to time of working in the teaching centres.

[Chapter 3, paragraph 52.]

(8) Medical schools as partners in the national health service should have an appropriate place in the administration of the service. If Central Health Service Councils are established for England and Wales, and for Scotland, the universities of the respective countries should be given adequate representation. Further, the various university medical schools in England and Wales should have representatives on the proposed local health services councils for the areas in which they are situated and the Scottish universities should be represented on the appropriate Regional Hospital Advisory Council and the local medical services committee. In every case the representatives of the medical schools should have the same status as representatives of other interests.

[Chapter 3, paragraphs 53-55.]

STAFF IN PRE-CLINICAL DEPARTMENTS.

(1) In university medical schools staffing arrangements in pre-clinical departments are on the normal university plan and no fundamental changes seem necessary in the types of appointment or, regius professorships apart, in the machinery for the selection of teachers.

(2) For the general advancement of pre-clinical subjects and the solution of recruitment and staffing difficulties, it is recommended (i) that higher salaries be paid to the professorial heads of pre-clinical departments; (ii) that more readerships and senior lectureships be created at adequate salaries; and (iii) that a sufficient number of junior staff be appointed to allow each member to devote a substantial part of his time to reading and research:

[Chapter 4, paragraphs 1-8.]

STAFF IN CLINICAL DEPARTMENTS, INCLUDING PATHOLOGY.

(1) Fundamental changes are necessary in the staffing arrangements in the clinical departments other than pathology.

(2) Under existing arrangements only a small minority of the senior staff hold whole-time appointments. Most clinical teachers are mainly engaged in private practice, in many cases attending the medical school and teaching hospital for only a few hours a week. As a rule they are not paid salaries. Apart from the relatively small number of university appointments such as those of professor, the clinical teachers are selected for the most part without reference to the medical schools. It is not customary to have at the head of each clinical department a teacher responsible for the organization and direction of the teaching and research work.

(3) The following changes are considered to be necessary to remedy the defects inherent in the present system.

(a) The creation of more whole-time appointments in all grades, senior, intermediate and junior.

(b) The adoption of new machinery for the selection of clinical teachers and members of the staffs of teaching hospitals, coupled with arrangements to minimize "in-breeding".

(c) The payment of salaries to clinical teachers in respect of defined duties.

(d) The reorganization of the educational work of the clinical departments on the basis of at least each clinical division having an academic head.*

[Chapter 4, paragraphs 9-10.]

More whole-time appointments.

(4) Almost all the medical schools have whole-time professors or readers in the various departments of pathology. There should be no exception to this practice.

[Chapter 4, paragraph 11.]

(5) In harmony with the general body of evidence it is recommended that, at the earliest possible date, the staff of every medical school should include a whole-time professor in each of the departments of general medicine, general surgery, and obstetrics and gynaecology. This goal will have to be reached by stages as suitable men and women become available. Interim arrangements are suggested.

(6) In the other clinical departments, with the possible exception of child health, social medicine and anaesthetics, the demands on the senior staff for undergraduate teaching are not normally such as require whole-time service; but in the case of several of these departments it may be desirable, if suitable persons are to be secured, for senior members to be whole-time officers of the teaching centre although only part-time on the staff of the medical school. A proportion of these appointments may be professorships and readerships.

(7) It is not proposed that the clinical teaching should be solely in the hands of professors and other whole-time teachers. Specialists who are part-time teachers have an essential contribution to bring to the training of medical students.

[Chapter 4, paragraphs 12-30 and 35-37.]

(8) On the question of whether whole-time clinical professors should be allowed a limited amount of private practice, and if so, on what terms, it is felt that the vital matter is to appoint as professors persons of the right outlook. If this be done, whatever rule is made regarding the professor's contacts with private patients will be of minor importance. But the professor

* For reorganization of educational work of clinical departments see section "General Clinical Instruction" below.

should be protected from pressure to see private patients other than in exceptional circumstances. It is thought that generally the most satisfactory form of protection will be secured by allowing the professor the right to attend a limited number of private patients, normally on the premises of the teaching hospital, but to stipulate that he shall not receive any fees from them.

[Chapter 4, paragraphs 31-34.]

(9) All clinical departments should have a number of whole-time appointments in the intermediate and junior grades, particularly the latter.

(10) For several years after the war the number of such appointments will probably have to be abnormally large in order that (i) the supply of specialists may become adequate for the national health service and (ii) the needs of medical officers returning from H.M. Forces may be satisfactorily met.

[Chapter 4, paragraphs 38-39.]

Selection of staff.

(11) The evidence has disclosed complete agreement as to the need (i) for suitable advisory machinery for the selection of the medical staff of a medical teaching centre, and (ii) for the making of arrangements to secure that posts are filled from the widest possible field of candidates.

(12) The machinery of selection and appointment to university chairs, readerships and similar senior posts should follow the usual university plan, subject to this qualification, that since the holder of a university appointment in a clinical subject should automatically become a member of the staff of the appropriate teaching hospital, arrangements should be made, where they do not already exist, for representatives of the governing body of the teaching hospital concerned to take part in the selection, or for the approval of the hospital governors to be obtained before the appointment is made.

(13) For the selection of other members of the medical staff above the grade corresponding to that of registrar, use should be made of a small joint advisory committee. The services of this committee should be used in exactly the same way for appointments to the parent and associated teaching hospitals.

(14) The members of a joint advisory selection committee for any teaching centre should be nominated by the university (in London by the university and the medical school) and by the governing bodies of the hospitals that are constituent parts of the centre. Provision should be made for the inclusion of at least one clinical teacher of the medical school and one or more experts in the branch of Medicine in which the appointment is to be held.

(15) In general, all appointments should be advertised and should not be limited to local candidates. Due weight should be given to ability to contribute to the educational and research work of the teaching centre.

[Chapter 4, paragraphs 40-47.]

(16) Representatives of local authorities in England and Wales and other witnesses have suggested that, so far as is practicable, the joint advisory selection committee for any teaching centre should be used for the selection of senior staff in non-teaching hospitals in the "zone of influence" of the centre.

[Chapter 4, paragraphs 48-49.]

Remuneration of clinical teachers.

(17) It will be necessary in future to remunerate part-time teachers on a salaried basis in respect of duties defined by the medical school. If it becomes the practice to pay the medical staffs of hospitals for their clinical services the salary paid to a clinical teacher should be a combined salary in respect of a joint appointment as teacher and clinician and should be greater than that paid to a non-teaching clinician of corresponding status.

(18) Except in the case of professorial and similar university appointments, the medical school and the other constituent parts of the teaching centre should consult together in fixing the salary and the proportion to be contributed by each.

[Chapter 4, paragraphs 50-52.]

(19) The smoothing out of present differences in regard to tenure of senior clinical appointments would be advantageous. It would be beneficial if clinical teaching appointments were made for limited terms of years, subject to renewal up to retiring age.

[Chapter 4, paragraphs 53-54.]

(20) With the object of securing an adequate supply of teachers in all departments, pre-clinical and clinical, it is recommended that a national range of salaries should be agreed for each grade of teacher, such a range to consist of a lower and upper limit within which the actual salary of every teacher of that grade, irrespective of the department, pre-clinical or clinical, to which he belongs, would be settled according to his capabilities and academic distinction, and the particular responsibilities of his post.

(21) A similar system of lower and upper limits should apply to the payment of part-time clinical teachers whether they are whole-time or part-time officers of the teaching centres.

[Chapter 4, paragraphs 58-68.]

(22) A raising of salaries will not overcome all the difficulties which at present beset the younger whole-time teachers in medical schools. A system of family allowances, the acquisition by universities of suitable property in which younger members of the staff could live at reasonable rents, travelling scholarships and regular provision for the granting of periods of study-leave with additional emoluments, are other measures which are commended.

[Chapter 4, paragraphs 69-71.]

(23) All whole-time appointments should be pensionable and pension arrangements should, if possible, be made for part-time teachers when the service given is of reasonable amount and duration. New pension arrangements are necessary to cover service in both voluntary and local authority hospitals.

[Chapter 4, paragraphs 72-73.]

Staff required.

(24) It is undesirable to frame a common pattern for teaching staff to which each teaching centre would be expected to conform. Each centre must decide its scheme to suit local conditions, tradition and policy. In an appendix to the report examples are given of the estimates of staff which have been used by the Committee in assessing future financial needs of medical schools.

(25) In some instances training has suffered because too many students have been attached to an individual teacher for bedside teaching. The number of students for which any one teacher is responsible should be limited to between 6 and 8. In consequence in a Scottish teaching centre the number of students allocated to a clinical unit should not exceed 25.

[Chapter 4, paragraphs 74-75 and Appendix I.]

(26) An adequate staff of non-medical technical assistants is essential in every medical teaching centre. The present keen competition for the services of trained technicians calls for settlement by a national scale of salaries and superannuation. Universities should recognize their responsibilities with regard to the recruitment and training of laboratory technicians, and the provision of reasonable amenities for them.

[Chapter 4, paragraphs 76-80.]

(27) A teaching department of any size should be provided with an adequate number of secretary-typists.

[Chapter 4, paragraph 81.]

(28) The important contribution that the nursing staff, by their good-will and co-operation, can make to the training of medical students should be recognized.

[Chapter 4, paragraphs 82-83.]

REGIUS PROFESSORSHIPS.

While very great care has undoubtedly been taken in the selection of candidates to fill regius chairs, it is considered that the retention of a procedure which makes possible the appointment to a university of a professor who may not be acceptable to the university and in whose selection the university may have had no voice, is contrary to the accepted principles of academic freedom. It is therefore hoped that the selection and appointment of candidates for all regius professorships will be transferred by the Crown to the authorities of the universities concerned.

[Chapter 4, paragraphs 55-57.]

ACCOMMODATION AND EQUIPMENT.

It is generally the case that in important respects the accommodation and equipment of medical schools and teaching hospitals for teaching and research purposes have fallen short of requirements both in standard and scope. A statement of requirements is appended to the report.

[Chapter 2, paragraph 82; chapter 3, paragraph 56 and Appendix G.]

STUDENTS.

(1) Unsuitability for a medical career should be the sole barrier to admission to a medical school.

[Chapter 5, paragraph 1.]

Women Students.

(2) In the interests of the public and of the medical profession, co-education, which has been the normal and successful practice for many years in all the medical schools in Great Britain outside London, should become the practice in every school.

(3) It is recommended for Government decision that the payment to any school of Exchequer grants in aid of medical education should be conditional upon the school being co-educational and admitting a reasonable proportion of women students. Questions relating to compliance with this condition should be decided by the University Grants Committee in consultation with the university authorities.

(4) Every possible step should be taken to see that all hospital appointments for qualified practitioners are filled by open competition and that the sex of the applicant is not a bar to appointment.

[Chapter 5, paragraphs 2-13.]

Financial Assistance.

(5) In England and Wales, but not in Scotland, there is a marked difference between the proportion of medical students and the proportion of students in the faculties of Arts and Science who are in receipt of financial assistance.

(6) While the faculties of Medicine of Scottish Universities draw students from all classes of the community, medical students in England and Wales are not recruited from so wide a field as are students in other branches of the universities. The main causes seem to be (i) misconceptions on the part of parents regarding the amount of assistance that can be obtained towards

the cost of medical education, and (ii) a lack of encouragement to secondary school pupils to take up Medicine as a career.

[Chapter 5, paragraphs 14-16.]

(7) Grants to medical students should be adequate in amount and should extend over the whole of the period of training. The cost of maintenance during training is the major part of the financial burden.

(8) Existing confusion in the arrangements for scholarships and grants should be ended and a simplification of the machinery for awarding assistance from public funds is desirable. It would also be helpful if private organizations and charitable trusts investigating applications for assistance kept in close touch with authorities considering the granting of assistance from public sources.

(9) Medical schools should have more adequate funds at their disposal for the following purposes: (i) to help medical students who are faced with the prospect of having to break off their studies on account, for example, of the financial failure or death of a parent; (ii) to encourage medical students of outstanding ability to interrupt their medical course in order to devote an extra year to the study of anatomy or physiology; (iii) to encourage graduates in other faculties to study Medicine.

(10) It must be brought home to boys and girls, to their parents and school teachers, that there is no profession offering a wider range of interests than Medicine, and that children of ability need not be deterred from entering the profession through lack of money.

[Chapter 5, paragraphs 17-28.]

Students from Overseas.

(11) While the primary obligation of medical schools in Great Britain must be to students born here, suitably qualified students from abroad, and particularly from overseas parts of the British Commonwealth and Empire, should be welcomed, their suitability as entrants being judged by exactly the same standards as those applied to students whose homes are in Great Britain.

[Chapter 5, paragraphs 29-33.]

Machinery for Selection.

(12) The selection of students is so important a responsibility and duty that it demands and should receive a great deal of time and thought from the medical schools.

(13) The following principles are generally agreed:—

(a) that before he begins his medical training a student must have received a good general education at least up to the recognized standard of entry to a university.

(b) that selection should not be based on examination results alone.

(c) that prospective students should be interviewed before acceptance and weight should be attached to the conclusions formed at such interviews and to confidential reports on an applicant's previous career.

(d) that selection machinery must be supplemented by arrangements to weed out as early in the course as possible (particularly in the first year) those students who prove unsuitable.

(14) The medical schools should carefully consider the extent to which special aptitude tests can be usefully applied.

[Chapter 5, paragraphs 34-35.]

Health, Recreation and Housing.

(15) Every university should provide a properly organized students' health service and it should be made compulsory for all medical students to have a medical examination on beginning their training and subsequently at such times as may be practicable and necessary.

(16) The provision by universities and medical schools of nourishing meals at reasonable prices would do much to improve the health of students.

(17) Some provision should be made *near* to the medical school to enable students to take proper physical exercise.

(18) The value of residential college life, particularly for medical students, cannot be over-estimated. Residential accommodation, which is at present scanty in most universities, should be extended as soon as practicable after the war. The interim objective may have to be to provide enough accommodation to enable every student to live for *part* of his undergraduate career in a hall of residence.

(19) Since, for some time, many students will perforce have to live in lodgings, the universities, in order to safeguard the health of students should assume responsibility for the approval and regular inspection of lodgings, and should require all students, other than those living at home or in halls of residence, to live in approved lodgings.

[Chapter 5, paragraphs 36-52.]

NUMBER AND DISTRIBUTION OF MEDICAL TEACHING CENTRES.

(1) The main criticisms levelled at the pre-war distribution of medical schools and students concerned (i) the large number of students trained in Scotland, and particularly in Edinburgh and Glasgow, (ii) the great concentration of schools and students in London, where there are nearly half the medical schools and students of Great Britain, and (iii) the absence of undergraduate medical schools in certain areas of the country, notably East Anglia and the South West of England.

(2) Future policy must be largely determined by the demand for and supply of medical practitioners in the future. The question of demand is one upon which at the present time there can be much speculation but no authoritative pronouncement. It has been assumed that more doctors will be needed.

(3) The number of doctors in civilian practice in Great Britain increased steadily before the war. It is expected that the number will continue to grow for some years to come. Should an increase in the total number of medical students prove necessary, the first objective should be an expansion of those existing schools that are below an economical size to an entry of about 100 students a year.

[Chapter 6, paragraphs 1-8 and Appendix A.]

Existing Medical Schools, excluding Oxford and Cambridge.

(4) The national need for doctors may render undesirable for some years any substantial reduction in the number of medical students trained in Scotland; but a decrease in their entries of medical students should be adopted as a long term policy by the Universities of Aberdeen, Edinburgh and Glasgow.

[Chapter 6, paragraphs 10-12.]

(5) Providing that the necessary additions are made to the teaching staffs, accommodation and equipment, all the existing medical schools in the English provinces and Wales could be expanded without detriment to the standard of training provided. These schools should enlarge their entries of students as quickly as possible.

[Chapter 6, paragraph 13.]

(6) The geographical distribution of the London medical schools was unsatisfactory even in pre-war conditions. The number and distribution of these schools after the war has to be considered in the light of (i) the

tendency for the population to move from the inner to the outer areas of London, (ii) the likelihood that the development of the hospital services on the periphery of London will lead to a decrease in the number of patients going from these areas to the teaching hospitals in the centre of London, and (iii) the need to provide the individual medical schools with increased teaching facilities.

(7) The claims of medical education on the one hand, and of the hospital service of London on the other, cannot be entirely reconciled and some of the benefits of university life may have to be sacrificed to the need for ensuring adequate clinical teaching facilities. However these facts may be weighed one against the other, on balance it seems clear that the future hospital needs of London are not likely to justify the continuance in the central area of all the teaching hospitals at present situated there.

[Chapter 6, paragraphs 14-25.]

(8) It is recommended that, as soon as practicable, Charing Cross Hospital should move to a site in Middlesex, and St. George's Hospital to a site in, say, south London where there is an urgent need for hospital accommodation, and that, thereafter, the medical school of each should expand in size and provide for both the pre-clinical and clinical parts of the medical course of training.

[Chapter 6, paragraph 26.]

(9) This recommendation implemented, the general distribution of medical schools and their parent hospitals remaining in London would be reasonably satisfactory except in the area in which University College Hospital, Middlesex Hospital and the Royal Free Hospital are situated. These three hospitals, together with nineteen other hospitals, are grouped within a radius of one mile. Six of these hospitals are special hospitals where post-graduate education should be developed. It appears extremely doubtful whether, under a co-ordinated hospital system, the area will be capable, in a few years' time, of providing adequate clinical teaching facilities for three medical schools of economic size. The removal of one of these schools further from the centre of London is advocated. It is suggested that the London School of Medicine for Women and the Royal Free Hospital should consider so moving.

[Chapter 6, paragraphs 27-31.]

(10) The amalgamation of some of the smaller clinical schools is not recommended.

[Chapter 6, paragraphs 32-37.]

(11) The schools remaining in the centre of London should aim to admit between 80 and 100 students a year to the clinical part of the course.

(12) In developing medical teaching centres round each of these schools the same considerations should be applied as in the case of medical schools in other parts of the country.

(13) The selection of associated teaching hospitals for the various schools should be settled by negotiation between the county councils, other hospital authorities concerned, the University of London and the medical schools.

[Chapter 6, paragraphs 38-40.]

University of Oxford.

(14) The University of Oxford, whose medical school before 1937 was in the main a pre-clinical one, wishes after the war to develop a small clinical school, the aim of which will be to cater specially for men and women students who can be expected to become "teachers, investigators and consultants, rather than general practitioners".

(15) It is believed that after the war the development of an undergraduate medical school on new lines would be particularly opportune. The University

of Oxford is well suited to undertake such an experiment and it is recommended that it should be encouraged and helped to do so. It is hoped that in making the experiment the University would revise freely and critically the *whole* of the curriculum.

[Chapter 6, paragraphs 41-52.]

University of Cambridge.

(16) The question of whether, in future, the University of Cambridge should provide for the clinical as well as for the pre-clinical training of undergraduate students has been considered both in the light of the country's needs and of the proposals put forward by the University and by Addenbrooke's Hospital.

(17) The raising of the hospital services in Cambridge to a very much higher standard than now obtains and the building up of active post-graduate clinical departments should precede any decision to establish an undergraduate clinical school. The development of such post-graduate departments in Cambridge is most desirable both in the effect it would have on the health services of the area and in the benefits that would result to the pre-clinical departments from closer contacts with clinical practice, teaching and research. These post-graduate departments can be developed piecemeal as the hospital services are raised to the requisite standard. A beginning might be made with departments in experimental medicine, radio-therapy, and psychiatry.

[Chapter 6, paragraphs 53-60.]

Establishment of New Schools.

(18) Consideration has been given to proposals for the establishment of new schools in certain parts of the country which at present are without such schools, and also for the establishment at a not too distant date of a medical school under the auspices of the London County Council.

(19) The general conclusions reached on the question of establishing new schools are:—

(a) Should an increase in the number of medical students be necessary it would be better policy to develop the existing schools to their full capacity before embarking upon the establishment of new institutions. The financial resources and the supply of suitably qualified teachers will be wholly needed for this purpose for a considerable number of years.

(b) To provide a stimulus to the hospital services of an area is not a sufficient reason in itself for the establishment of a medical school. There must first be proof of a national need for another school and it must be clear that a school at least of the standard of existing schools can be provided.

(c) Any proposal to develop a medical school at one of the independent university colleges should be deferred until such time as the university college concerned has become fully established as a university.

(d) The undergraduate medical schools in London are already too numerous to warrant any addition to their number at the present time. The pressing needs are to secure adequate facilities for the existing schools, and the better organization and development of the exceptional facilities of London for post-graduate medical education.

[Chapter 6, paragraphs 61-65.]

PRE-MEDICAL STUDIES.

(1) The present arrangements for the study of the physical and biological sciences are not yielding satisfactory results and have been the subject of widespread criticism.

(2) The training that a medical student needs in the physical and biological sciences is best begun at school as part of his general education and continued at the medical school in close association with the training in anatomy and physiology.

(3) Proposals are made for the attainment of such a division of the training. These proposals will involve changes in the secondary school curriculum and examinations, an increase in the supply of teachers qualified to teach general science in the secondary schools, and improvements in the quality of such teaching, particularly in respect of biology. Changes are also involved in the arrangements for teaching the physical and biological sciences in the medical schools. It is suggested that such teaching in future should form part of the pre-clinical period.

[Chapter 7, paragraphs 1-20.]

PRE-CLINICAL STUDIES.

(1) The character of the student's training in the pre-clinical subjects largely determines his mental attitude and intellectual methods in the clinical part of the course. Pre-clinical and clinical teachers should co-operate to secure continuity in the curriculum and a proper dovetailing of their respective teaching.

(2) The ideal to be aimed at, though it may not be capable of full realization in every case, is for the pre-clinical departments to be organized in the closest association with other university departments and also with the parent teaching hospital of the medical school.

(3) As part of the measures necessary to bridge the gap between the pre-clinical and clinical periods, an overlap of personnel engaged in the two periods would be advantageous, and there should be freer access to patients for the teaching of anatomy and physiology.

(4) A better educational approach would be provided by a closer integration of the teaching in anatomy, physiology, bio-chemistry and pharmacology.

(5) There is an urgent need for a new view-point on the part of teachers of the pre-clinical subjects and for the drastic elimination from their teaching and the examinations of a mass of detailed information. Upon these teachers rests the responsibility of laying the foundations of the student's belief in the importance of health and the prevention of disease.

[Chapter 7, paragraphs 21-29.]

(6) For some years the number of subjects available for dissection has been below the number required for teaching purposes. The deficiency is likely to increase. An amendment of the Anatomy Acts, or new legislation, might be helpful.

[Chapter 7, paragraph 30.]

(7) For the encouragement of post-graduate students to act as members of research teams in the pre-clinical departments there is a need in most universities for more studentships, scholarships and maintenance grants, similar to those awarded by the Department of Scientific and Industrial Research for students in training for research.

[Chapter 7, paragraph 31.]

PRE-MEDICAL AND PRE-CLINICAL STUDIES IN LONDON.

(1) It is recommended that the elementary grounding in chemistry, physics and biology for those students of the London medical schools who have not received the requisite training at school should, in due course, be given only in the colleges, such as University College, King's College, Bedford College, and Queen Mary College, which have science and other faculties.

[Chapter 7, paragraph 17.]

(2) In the belief that the close proximity of pre-clinical and clinical departments must be the overriding consideration, it is proposed that, with certain specified exceptions, every medical school in London should provide for both the pre-clinical and clinical parts of the course of training.

[Chapter 7, paragraphs 32-45.]

PATHOLOGY.

(1) The division of pathology of a teaching centre should normally consist of four departments: morbid anatomy, bacteriology, chemical pathology and clinical pathology. Each department should have a whole-time professor, reader or senior lecturer at its head, and adequate assistant staff.

(2) At the head of the division there should be a director, this position being filled by the departmental head most suited to administrative work. The director should be responsible, in collaboration with the other departmental heads, for the general organization of teaching throughout the division and for the linking of this teaching with that in other divisions. He should also be in general charge of the pathological investigations of patients in the parent teaching hospital, and, if practicable, in associated teaching hospitals.

(3) Pathologists attached to special departments should be members of the staff of the division of pathology and should maintain as much contact as possible with the work of the division as a whole.

(4) A medical student should be given a sound knowledge of the fundamental principles of pathology; he does not need to acquire either detailed knowledge or technical skill.

(5) An introductory course on the basic principles of pathology might well form part of the introductory clinical course. The rest of the training, instead of being relegated to a short period of intensive study, should be spread over the whole of the clinical period.

(6) If pathology is to take its proper place in undergraduate medical education, it is essential that students should see day-to-day collaboration between clinicians and pathologists at the bedside, in the out-patient departments and in the laboratories.

[Chapter 8.]

GENERAL CLINICAL INSTRUCTION.

(1) In the past there has been a strong tendency, recognized but not corrected, for the undergraduate course to consist of instruction in what may seem to the student to be a series of isolated subjects having little relation to one another.

[Chapter 9, paragraph 1.]

Introductory Clinical Course.

(2) An introductory clinical course of planned scientific instruction, extending over not less than four months, is regarded as the best means of effecting a smooth transition from pre-clinical to clinical study. At present many students find the change over from laboratory and lecture room life to work in hospital a difficult and sometimes disheartening experience.

(3) The aims of this course should be: (i) to help students in their adjustments to new conditions of work and study, (ii) to show them the relation to clinical studies of their earlier study of the human body and its functioning in health, (iii) to encourage them to carry methods of scientific thought and criticism into clinical work, and (iv) to assist them to acquire, without loss of time, the ability to observe and interpret physical signs of disease.

(4) Since the course will call for a large expenditure of time by the teachers, its organization and general direction should be the responsibility of the whole-time heads of the divisions of pathology, medicine and surgery. The course will also make heavy demands on clinical facilities in that it will require the selection of a series of cases to illustrate each aspect of disease in logical sequence.

[Chapter 9, paragraphs 2-10.]

Educational Problems Created by Specialization.

(5) A medical student needs a coherently unified knowledge of Medicine. He has to acquire it in an atmosphere of specialization, and from teachers who, to an increasing extent, will be specialists. The growth of specialization necessitates modifications in the traditional organization of clinical training in Great Britain.

(6) It has been the custom to organize hospital work and the clinical training of students on the basis of independent clinical units (sometimes called "firms" or "clinics"), each of which consists of one or two physicians or surgeons, an assistant (usually called a registrar), one or more house-officers, and a small group of students. The clinicians and their assistants are responsible for, and largely determine the nature of, the clinical training which students receive when attached to the unit.

(7) The following scheme is recommended for the future:—

(a) In the training of specialists, a sound post-graduate experience of general medicine and surgery should be made a prelude to specialization.

(b) The teaching work of a medical teaching centre should be organized in five divisions:—(i) pre-clinical studies, (ii) pathology, (iii) medicine, (iv) surgery, (v) obstetrics and gynaecology. Each division would embrace the appropriate departments. In the division of medicine would be included the department of general medicine, child health, psychiatry, social medicine and other departments concerned with medical specialities. Likewise the division of surgery would include the departments concerned with general and special surgery. The allocation to a division of some departments may have to be made arbitrarily. Certain departments may be included in more than one division.

(c) Each department should have a whole-time or part-time academic head, personally responsible, in collaboration with his colleagues in the department, for the general direction of teaching and research carried out by his department in the institutions and services of the teaching centre.

(d) Each of the divisions should have an academic head. In the case of the divisions of medicine and of surgery the professors (or equivalent head) of the departments of general medicine and general surgery respectively would normally fill the positions. The head of the division, in co-operation through suitable machinery with the academic heads of the departments within the division, should see that the resources of the departments are used and their teaching related in the interests of the education of students.

(e) The main administrative responsibility for correlating the teaching during the clinical period should rest with the dean and the academic heads of the various divisions.

(f) The clinical work of the teaching hospitals and the clinical teaching of students would continue to be conducted on the basis of clinical units. The clinicians in charge of these units would retain unfettered responsibility for the care and treatment of their patients; but they would have rather less independence in the training of students, being subject to a measure of direction by the academic heads of the various departments. In the latter respect they would be in the same position as teachers in other university faculties.

(8) The organization of teaching is likely to be assisted if (i) informal meetings of all teachers are held periodically for the discussion of the content of teaching and the correlation of teaching between departments; and (ii) the views of students regarding existing deficiencies and desirable improvements are obtained regularly.

[Chapter 9, paragraphs 11-21.]

Out-Patient Teaching.

(9) The facilities for out-patient teaching in the training of undergraduate medical students have not been fully utilized.

(10) Apart from an urgent need for more space and a larger staff for out-patient departments, the following requirements must be fulfilled if the student is to derive full benefit from his instruction in these departments:—(i) all members of a clinical unit, including the senior clinicians, should participate in out-patient work; (ii) the work of the unit in its wards and out-patient departments should be closely related; (iii) the number of out-patients a teacher is called upon to see at a session at which he is instructing students, should be strictly limited.

[Chapter 9, paragraphs 26-31.]

Continuous Clinical Instruction.

(11) The continuance in the Scottish schools of the war-time scheme of four terms a year in the clinical period is regarded as an improvement on the pre-war system; but it is hoped that these schools will seriously consider re-arranging their curricula on the basis of continuous clinical instruction throughout the clinical year, as is advised by the General Medical Council and is the practice in England and Wales. A staff which is adequate for the present arrangements should be able to conduct training on the continuous system without additions to their number or increased teaching demands on individual members.

[Chapter 9, paragraphs 33-38.]

Residence during Training.

(12) Students would be better fitted for their future work if it were arranged for them to reside in hospital for a total period of about six months during the clinical part of their training, this period comprising two months devoted to general medicine and surgery, two months during midwifery training, two to four weeks in an infectious diseases hospital and one month in a children's department or hospital.

[Chapter 9, paragraphs 39-41.]

MEDICINE, SURGERY, AND OBSTETRICS AND GYNAECOLOGY

(1) A fundamental and urgent reform is to secure that the main emphasis during the training is on basic principles and methods, and that due regard is given to the scientific foundation and framework of Medicine. The responsibility for effecting this reform rests on the teachers and examiners and on those who prescribe the regulations for the training and examinations.

(2) In the organization and conduct of the training there is failure in various respects, to take proper account of the types of problems that most frequently face practitioners in general practice. At the same time undue attention is paid to certain subjects that are out of place in a basic course; particularly one that is followed by a compulsory period of hospital appointments.

(3) If students are to be trained effectively and are to be properly equipped for practice as family doctors, general medicine must form the most important part of their clinical training.

(4) More attention must be given to minor ailments, the more common diseases and the early stages of disease, to chronic diseases, to infectious diseases, to rehabilitation. Proposals are made to this end.

(5) The surgical part of the undergraduate course should be closely correlated with other clinical work. It should be concerned primarily with the inculcation of general surgical principles.

(6) The technical details of operative measures, usually regarded by the layman as the whole content of surgery, are matters for post-graduate study.

The training of an undergraduate in surgery should be directed to the recognition, early treatment, personal, social and economic effects of those surgical conditions commonly encountered in general practice (acute injuries, acute infections, abdominal emergencies and malignant disease).

(7) Many surgical procedures now taught in the undergraduate course would be better learned during the period of pre-registration house-appointments.

(8) Consideration is given to the training in various medical and surgical specialities, again with the intention that the training should be restricted to such knowledge as is required by general practitioners.

[Chapter 10.]

(9) In most schools, the attention paid to social medicine, the promotion of health and the prevention of disease is often perfunctory and largely divorced from the rest of the student's training. If medical students are to be fitted to become health advisers and members of a national health service, the ideas of social medicine must permeate the whole of medical education. A new orientation of medical education, a big expansion in the social work of teaching hospitals and radical changes in the outlook and methods of most of the teachers are involved. The lines of future development are discussed.

[Chapter 11.]

(10) To safeguard its own future, the nation will have to improve its provision for the welfare of children. These improvements will extend beyond the immediate sphere of Medicine, but medical practitioners will have to play a leading part in raising the health of the children to the highest possible level. Generally in the medical schools the teaching about children has been inadequate and only faint interest has been taken in the subject. The deficiencies have been most serious in respect of child health and normal development. Proposals are made for the improvement of present arrangements.

[Chapter 12.]

(11) Whether he is dealing with problems of health or sickness, a medical practitioner cannot fully understand his patients or advise and treat them adequately unless he pays due attention to their psychological background. The training in psychiatry has failed to keep pace with the growing realization of the important place which the subject should occupy in medical thought and practice. In future, every medical teaching centre must have an active department of psychiatry, the work and teaching of which are related to the work and teaching of the other departments. These departments cannot be established until there is an adequate supply of competent teachers of psychiatry. The training of such teachers is a major and urgent need.

[Chapter 13.]

12. In many schools, the experience which students gain of maternity work falls far short of what is necessary. Proposals are made for securing that students are properly equipped to take part in the maternity service. It has been assumed that, in future, a general practitioner will refrain from dealing with abnormal obstetric conditions, beyond possibly those involving only minor manipulative or instrumental interference, unless he has obtained post-graduate experience by holding appointments in maternity hospitals or departments.

[Chapter 14.]

COMPULSORY PRE-REGISTRATION HOUSE-APPOINTMENTS.

(1) There has been enthusiastic support for the proposal, the adoption of which is recommended, that every student, after he has passed his final qualifying examination and before he is admitted to the Medical Register

and allowed to enter independent medical practice, should be required to serve as a junior house-officer for a period of twelve months in one or more approved hospitals.

(2) Before the war about half the students admitted to the Register in any year obtained additional hospital experience before entering independent practice. As a result of war-time conditions and regulations, the proportion has been raised to over 90 per cent.

(3) The most satisfactory results will be obtained if the pre-registration house-appointments are confined to the departments of general medicine and surgery, and if six months is the minimum period for any single appointment. During these periods organized provision should be made for the student to gain further experience in the work of special departments, but house-appointments in these departments and also in obstetrics and gynaecology should be held after admission to the Medical Register.

[Chapter 15, paragraphs 1-12.]

(4) It is neither necessary nor desirable for an examination to be held at the end of the compulsory period of house-appointments. When the student applies for admission to the Medical Register he should submit certificate(s) to the effect that he has held the prescribed appointments to the satisfaction of his medical school and the hospital(s) concerned.

[Chapter 15, paragraph 13.]

(5) For the success of the scheme it will be necessary for holders of pre-registration house-appointments to be given free board and lodging and paid at a rate that is more or less uniform throughout Great Britain.

[Chapter 15, paragraph 14.]

(6) To make possible the prescribing of twelve months as the compulsory period a large number of appointments will have to be found in associated teaching hospitals and non-teaching hospitals. No serious difficulty in securing such appointments is expected, but an up-grading of staff and a revision of existing staffing arrangements may have to be made in some cases.

(7) Any hospital outside a teaching centre that is used for pre-registration house-appointments should be specially approved for the purpose by a university.

(8) It will not be possible or desirable to effect an exclusive link between a particular medical school and an approved hospital. A university, after approving a hospital, should notify the General Medical Council, which should publish a complete list of approved hospitals from time to time.

(9) The responsibility for placing a student in a pre-registration house-appointment should rest with the student's medical school.

[Chapter 15, paragraphs 15 to 19.]

(10) The proposals outlined above will involve amendments to the Medical and other Acts.

[Chapter 15, paragraphs 20 to 24.]

CURRICULUM AND EXAMINATIONS.

Functions of the General Medical Council.

(1) The educational functions of the General Medical Council are reviewed.

(2) There is need for some central source from which the medical schools can obtain advice and guidance and to meet this need it is recommended that the statutory powers of the Council should be extended to permit the Council to appoint inspectors, who should not be members of the Council, to visit the medical teaching centres from time to time and to report upon courses of study, staffing, accommodation, equipment, arrangements and facilities for undergraduate medical education.

(3) Copies of the reports of the Council's inspectors, together with the comments of the Council and of the institutions concerned, should be communicated to the University Grants Committee.

[Chapter 16, paragraphs 1-16.]

Final Examinations.

(4) A medical student trained in Great Britain may qualify for admission to the Medical Register *either* by virtue of a university medical degree *or* by virtue of a diploma of one of the licensing bodies.

(5) The system of final examinations adopted in the Scottish and in the provincial universities of England and Wales (Oxford and Cambridge excluded) is on the whole satisfactory. The position is different in respect of students taking the clinical part of their training in London.

(6) The view is held (i) that the course of study provided by a medical school of a university should be the course prescribed for the university degree, (ii) that any student who has followed his course of study to the satisfaction of his teachers should be able to obtain a degree mainly for the work he has done during his course, checked by a reasonable examination, (iii) that it is most undesirable that London students should be encouraged to take two final examinations, the subjects of which are the same and the standards only slightly different, (iv) that the payment of two separate examination fees, both fairly high, is not justified by the benefits obtained by the student, and (v) that the practice of reading for the M.B., B.S. degree when holding a resident appointment is not in the best interest of the student.

(7) It is recommended that every medical school should provide a single organized course of training for undergraduate students based upon the requirements for the medical degree of the university of which the medical school is a part, *and* should make it compulsory for every medical student of the school to complete this course of training before presenting himself for examination in a clinical subject at any final qualifying examination for admission to the Medical Register.

(8) It is suggested that the University of London should reconsider the standard of its final examination and should introduce into the examination some "internal" features, as it has already done with success in the examinations in the pre-clinical subjects.

(9) The suggestion made in (8) above also applies to the Universities of Oxford and Cambridge.

(10) The surplus of funds derived from the examination of undergraduate medical students should be applied directly to meeting the cost of the students' training.

[Chapter 16, paragraphs 17-29.]

Departmental Examinations.

(11) In order that the burden of final examinations may be relieved and students encouraged to pay proper attention to all parts of the training, it is suggested that a system of "internal" departmental examinations in suitable subjects should be instituted as a complement to the final examination.

[Chapter 16, paragraph 30.]

Curriculum.

(12) A drastic overhaul of the medical curriculum is an urgent necessity and its accomplishment might be made a condition to be satisfied before any increase is made in Exchequer grant in aid of undergraduate medical education. It is recommended that the General Medical Council should take the initiative in this matter without delay.

(13) In view of the proposed compulsory period of pre-registration house-appointments it is urged that the total length of the course of training leading to the final examination should not exceed $4\frac{1}{2}$ years. The period of house-appointments would be additional to the $4\frac{1}{2}$ years.

(14) Apart from the immediate revision, each medical school should keep its own course under continual review, and the General Medical Council should survey the various curricula periodically, preferably in the middle of each quinquennial period for Exchequer grant.

[Chapter 16, paragraphs 31-34.]

PART II—POST-GRADUATE MEDICAL EDUCATION AND RESEARCH.

(1) The provision so far made for post-graduate medical education in Great Britain lacks organization and cohesion. A nation embarking on a comprehensive health service cannot afford to do without a comprehensive system of post-graduate medical education.

[Chapter 17, paragraphs 1-3.]

POST-GRADUATE TRAINING AND EXPERIENCE FOR INTENDING SPECIALISTS.

Clinical subjects, excluding pathology.

(2) There is a large consensus of opinion on the following general principles concerning specialist status in the clinical subjects, excluding pathology—

(a) that qualifications and standards of specialist status should be determined by some suitable central machinery;

(b) that the primary requisite should be approved post-graduate training and experience of a determined length;

(c) that before he begins to specialize, a practitioner should obtain *general* clinical experience in resident hospital appointments, and where appropriate, further knowledge of one or more of the following:—pathology, anatomy, physiology and one of the other sciences allied to Medicine.

(3) On the assumption that these principles are adopted and that the period of post-graduate training and experience for clinical specialists is a minimum of 4 to 5 years after registration, the following observations are put forward;—

(a) That while holding the salaried hospital appointments which will constitute the major part of the prescribed training and experience, the intending specialist should be regarded as a trainee and be given adequate time for reading, reflection and research. The following conditions must be satisfied (i) he must not be overburdened with routine work, and (ii) he must be adequately remunerated.

(b) As a rule the basis of the training and experience should consist of at least six months (in addition to the period of pre-registration house appointments) of resident clinical experience of general medicine or surgery.

(c) Every trainee should have the opportunity to devote himself for a period to the extension of his scientific knowledge by laboratory work and study.

(d) Specialist trainees in the various branches of Medicine and in the allied sciences should be given every encouragement to work together on problems of common interest.

(e) Watch should be kept for the potential teachers among trainees and, from an early stage, their teaching powers should be developed by guidance and criticism.

(f) Provision should be made, by such means as travelling fellowships, for trainees to obtain the benefit of working for a time in suitable hospitals and medical schools abroad.

(g) Such regulations as may be made should not preclude a practitioner from beginning to train for specialist status after a period in general practice.
[Chapter 17, paragraphs 4-16.]

(4) The undergraduate teaching centres should cater for specialist trainees to the fullest possible extent consistent with their primary educational responsibility for the training of undergraduate students. The general practice will be for specialist trainees to hold salaried appointments in the teaching centres and, as their training and experience develop, to assist in the training of medical students and the routine work of the institutions concerned.

(5) On account of the facilities provided for specialist trainees, an undergraduate teaching centre will require a larger staff than would be required for the care of patients and the teaching of undergraduate students alone.
[Chapter 17, paragraphs 17-21.]

(6) Post-graduate schools such as the British Postgraduate Medical School in London and the Post-graduate Medical School of the University of Oxford will make their main contribution by providing clinical appointments to be held by specialist trainees during the latter half of the prescribed period of training and experience.

(7) In the case of most of the special branches it will be necessary for the greater part of a trainee's experience to be obtained in one or more special hospitals. Provision in respect of facilities in such hospitals is singularly lacking in Great Britain. If the insufficiency of competent specialists in certain branches of medicine and surgery is to be remedied, a number of institutes should be developed in the special subjects to serve as the spearhead of post-graduate education and research in those subjects. All these institutes should be departments or schools of universities. Each should be based upon a large hospital which specializes in the branch of medicine in question and conforms to university standards in respect of staffing, teaching accommodation and equipment.

(8) The universities, in consultation with the professional and scientific bodies concerned, should agree on a national plan for post-graduate institutes in special subjects.

(9) For the training of intending specialists, full use should also be made of other suitable hospitals, particularly those approved for the purpose of pre-registration house-appointments.

[Chapter 17, paragraphs 22-31.]

Pathology.

(10) It is most desirable that, if arrangements are made for determining the status of specialist clinicians, corresponding arrangements should be made in respect of pathologists.

(11) It is suggested that the post-graduate training and experience of a pathologist trainee might take the form of three years' work in the various departments of the division of pathology of a medical teaching centre, followed, generally, by six months or a year either abroad or in a hospital away from the teaching centre. At the end of this time, the training should be equipped for an appointment in the intermediate grade of the general pathological laboratory service of the country; but if he wishes to become a specialist in any branch of pathology, it is at this stage that he would be attached for a further period to the department of his choice.

(12) The possession of a post-graduate diploma in, say, bacteriology or clinical pathology should not of itself entitle the holder to recognition as a

specialist pathologist. Such special courses as may be provided in preparation for these examinations will be required mainly for students from overseas and for science graduates who do not possess a medical degree.

[Chapter 17, paragraphs 32-35.]

Public Health.

(13) The standard applied to medical specialists in public health should be comparable to that applied to specialist physicians and surgeons, and the prescribed period of training and experience should be of approximately the same length. It should include the holding of posts as senior house officers with the object of adding to the trainee's general and special clinical experience; attendance at a course of instruction and a period of service as an assistant to one or more whole-time medical officers of health.

(14) The course of instruction must be planned and carried out by institutions that have staff and facilities of university standard. The examination for the diploma in public health should be conducted only by the universities providing the training.

[Chapter 17, paragraphs 36-38.]

Tropical medicine and hygiene.

(15) Adequate clinical training in tropical medicine cannot be obtained in this country and it is suggested that, having obtained his theoretical and laboratory instruction here, a student wishing to specialize in this subject should be required to hold approved hospital appointments in tropical countries.

[Chapter 17, paragraph 39.]

OTHER FORMS OF POST-GRADUATE EDUCATION.

Refresher courses.

(1) Post-graduate study should be a regular and recognized feature of general practice, and adequate and suitable facilities should be provided.

(2) The provision for general practitioners of periodic, intensive refresher courses should be regarded as a short-term expedient rather than as part of a long-term policy of medical education. The better policy is to bring general practitioners by various means, such as clinical assistantships, into regular association with the work of hospitals and of specialists. Personal associations with visiting specialists should greatly increase with the development of a national health service and, when these are fully established, the need for refresher courses should be slight.

(3) For many years after the war, apart from the provision required in respect of medical practitioners returning from H.M. Forces, an organized system of regular refresher courses for general practitioners will, however, be necessary.

(4) Such courses should be specially designed for general practitioners, should be practical in nature, and full use should be made of out-patient departments. The courses, which should be well distributed throughout the country, would preferably need to be of varying types and lengths.

(5) If it be decided to make attendance at such courses compulsory, similar financial arrangements will probably have to be made to those embodied in the scheme in operation before the war for refresher courses for National Health Insurance practitioners.

(6) In order that the teaching may reach, and be maintained at, a high level, the responsibility for organizing refresher courses should rest with the universities having a medical faculty. In general, the courses should be conducted elsewhere than in institutions comprising undergraduate teaching centres and by teachers specially approved by the universities for the purpose.

[Chapter 18, paragraphs 1-13.]

Other forms of post-graduate education.

(7) Provision should be made for practitioners from home and overseas who wish to improve their knowledge of particular subjects. In addition to the British Postgraduate Medical School, each university having a medical faculty should arrange suitable post-graduate courses of instruction for such practitioners. As a rule, such courses should be in hospitals other than those used for undergraduate teaching. In some cases short-term clinical assistantships may be the best means of providing the desired instruction.

[Chapter 18, paragraphs 14-15.]

Administration.

(8) For the fulfilment of its responsibilities in connexion with the organization of post-graduate education each university should appoint a special committee or board of post-graduate medical studies and should also depute a person to undertake the organization and general supervision of the post-graduate courses coming within the ambit of this committee. His responsibilities and duties should be integrated with those of the dean of the faculty of medicine of the university.

[Chapter 18, paragraphs 16-17.]

POST-GRADUATE MEDICAL EDUCATION IN LONDON.

(1) The exceptional resources of London as a centre for post-graduate education for medical practitioners from all over the world are not being properly utilized.

(2) The obvious nucleus of a scheme for post-graduate-medical education in London is the British Postgraduate Medical School which was founded with the aim of providing such a centre for the advancement of medical knowledge as would be worthy of the British Commonwealth and Empire.

(3) The British Postgraduate Medical School has, since its opening in 1935, established main departments in medicine, surgery, obstetrics and gynaecology, and pathology. It has not developed organized departments in the various special subjects and has only recently begun to establish links with the large special hospitals in London. The building up in London of an organization embracing all branches of post-graduate medical education has yet to be achieved.

[Chapter 19, paragraphs 1-8.]

(4) Ideally, the British Postgraduate Medical School should be an integral part of a post-graduate hospital centre, situated in the inner area of London and consisting of a general hospital together with a number of separate institutes for each of the principal branches. The obstacles to the achievement of this ideal in the near future seem insuperable but, on a long view, the ideal should be adopted by the hospital authority for London as a guide in the preparation and carrying out of its plans under the national health service.

[Chapter 19, paragraph 9.]

(5) A satisfactory organization of post-graduate medical education can be developed around the British Postgraduate Medical School, on the basis of Hammersmith (L.C.C.) Hospital and existing special hospitals.

(6) It is recommended that the British Postgraduate Medical School should be reconstituted as a federal organization, of which the Hammersmith (L.C.C.) Hospital and the teaching organization associated with it would be one of the federated units. The other units would consist of a series of institutes in each of the principal special subjects, each of these institutes being based on a leading special hospital.

(7) A scheme is outlined in the report. In spite of the size of the task it is believed that, with support from public funds and the enthusiastic co-operation and goodwill of all concerned, the scheme can result in the building up in London of a great world centre for post-graduate medical education and research.

(8) Despite the existence of the British Postgraduate Medical School, the University of London should, like the other universities, appoint a committee for post-graduate medical studies.

[Chapter 19, paragraphs 10-30.]

POST-GRADUATE MEDICAL DIPLOMAS.

(1) The position with regard to the award of post-graduate medical diplomas, other than the fellowship or membership diplomas of the Royal Medical Colleges, is unsatisfactory. There are too many of these awards; there is considerable variation in standard even in the case of qualifications in the same subject; ill-grounded and immature specialization is encouraged.

(2) The post-graduate experience demanded of candidates for any of these diplomas is much less than the Royal Medical Colleges and other interested bodies consider should be required in future before a medical practitioner is recognized as of specialist status.

(3) It is recommended that the award of all post-graduate medical diplomas other than those in public health, clinical pathology, bacteriology, and tropical medicine, should be undertaken solely by the Royal Medical Colleges.

(4) Diplomas in public health, clinical pathology, bacteriology and tropical medicine should be awarded solely by the universities providing the courses of instruction in preparation for them.

[Chapter 20.]

MEDICAL RESEARCH.

(1) Innumerable problems of health and disease are awaiting solution.

(2) A community that wishes to promote research must first find and train the men who have the ability and impulse for scientific enquiry. It must then create the most favourable conditions for their work and give them the tools they need.

[Chapter 21, paragraphs 1-2.]

Recruitment of workers for medical research.

(3) Young research workers should mainly recruit themselves, their careers being closely watched and guided.

(4) When a worker has proved his research ability and has chosen research as a career, he should be given reasonable security in this career.

(5) Scientific workers in other than medical fields have a valuable contribution to make to medical research.

[Chapter 21, paragraphs 3-5.]

Policy of the Medical Research Council.

(6) The Medical Research Council has been appointed by the Government to assist, develop and co-ordinate medical research in this country.

(7) The Council has used two methods for promoting research:—(i) the appointment of selected workers to its own scientific staff, and (ii) the making of grants, renewable from year to year, to workers in universities, hospitals and other institutions.

(8) With the important exception of the National Institute for Medical Research and one smaller laboratory, which are completely self-contained establishments, the Council has not set up institutions of its own, but has supplemented the research facilities and resources of universities, medical schools and hospitals.

(9) Grants are not made to institutions as such, or in aid of general programmes, but always to individuals and for specified lines of investigations.

[Chapter 21, paragraphs 6-8.]

Provision for research in medical teaching centres.

(10) Medical schools, teaching hospitals and post-graduate institutes have three important functions in relation to medical research: (i) to discover and train future research workers; (ii) to encourage and facilitate original investigations by members of their teaching staffs; and (iii) to house special research units and workers.

(11) Proposals are made regarding the provision necessary in respect of staff, accommodation, equipment and access to patients. This provision, though directed to the promotion of research, is necessary in order that the medical schools and teaching hospitals may be efficient teaching institutions. Public grants to medical schools and teaching hospitals must include basic research grants.

(12) Apart from these basic grants, extra grants will be needed from public and private sources for the support of special investigations by regular members of the staffs of teaching centres and research workers attached to the centres specially for the purpose.

(13) It would assist the Medical Research Council, the medical schools and research workers, if funds placed at the disposal of the Council by Parliament were determined annually.

[Chapter 21, paragraphs 9-13.]

Facilities in other hospitals.

(14) Medical research should also be encouraged and supported in non-teaching hospitals, particularly those approved for pre-registration house-appointments.

[Chapter 21, paragraph 14.]

PART III—FINANCIAL CONSIDERATIONS.

FUTURE FINANCIAL NEEDS.

(1) The improvement of undergraduate and post-graduate medical education and the promotion of research will involve large increases in expenditure. Public funds and private benefactions are the sources from which the increase will have to be met.

[Chapter 22, paragraphs 1-2.]

(2) Estimates inevitably are conjectural, but a general assessment shows that, to meet recurrent expenditure on undergraduate and post-graduate education, including training of specialists and basic provision for research, the university medical schools will need *additional* resources which, within 10 years will amount (at pre-war values) to between £1,750,000 and £2,500,000 a year, dependent upon whether some of the schools expand to meet a need for more doctors. Capital expenditure of the university medical schools is estimated to amount, at pre-war costs, to not less than £5,000,000.

[Chapter 22, paragraphs 3-10.]

(3) Teaching hospitals are indispensable to medical teaching and research, and they should receive grants from public funds towards meeting the expenditure, both recurrent and capital, in providing facilities for teaching and research.

(4) It is recommended (i) that, as soon as possible, arrangements should be made for the adoption throughout the hospital service of Great Britain of a uniform system of hospital accounts, including a costing system; (ii) that,

until a more satisfactory assessment can be made of the extra cost to a hospital of providing teaching and research facilities, an annual sum equivalent to £500,000 at pre-war values be allocated from central Exchequer funds as educational grants for teaching hospitals; and (iii) that, thereafter, the amount of the recurrent grants in respect of educational and research facilities in teaching hospitals should be fixed, in the light of the data then available, on applications made by the medical schools on behalf of their respective medical teaching centres.

(5) The grants referred to in (4) would be additional to grants which teaching hospitals would be entitled to receive on account of participation in the national health service.

(6) Capital expenditure amounting to several million pounds should be incurred by teaching hospitals in remedying deficiencies in accommodation and equipment for teaching and research.

[Chapter 22, paragraphs 11-15 and 19-25.]

(7) In whatever arrangements the Government may make concerning capital expenditure on the hospital service, regard should be had to the fact that teaching hospitals may have to incur expenditure on accommodation and equipment which, though not used exclusively for medical teaching and research purposes, is needed in the interests of medical education.

[Chapter 22, paragraph 26.]

(8) A system of composite fees should be introduced by all medical schools, and the practice in Scotland of requiring students to make direct payments to the teaching hospitals, through "hospital tickets" should be discontinued.

[Chapter 22, paragraphs 16-18.]

(9) For part of the scheme for the development of the British Post-graduate Medical School, for certain post-graduate clinical departments in Cambridge, and for refresher courses an additional £170,000 to £190,000 a year will be needed, together with monies for capital expenditure of £550,000 to £1,150,000. Allowance must also be made for six other post-graduate institutes in London for which estimates cannot be framed at present and also for the development of such institutes in other universities.

[Chapter 22, paragraphs 28-30.]

MACHINERY FOR DISTRIBUTION OF EXCHEQUER GRANTS.

(10) It is proposed (i) that the central distribution of Exchequer grants in aid of undergraduate and post-graduate medical education and the basic provision for medical research should continue to be in the hands of the University Grants Committee, and that this Committee should also distribute Exchequer grants in respect of educational facilities provided by teaching and other hospitals; (ii) that in making its distribution of all such grants the Committee should, in accordance with its established practice, deal with the authorities of the various universities.

(11) The universities should be responsible for submitting applications to the University Grants Committee for grants on behalf of their undergraduate and post-graduate medical schools and institutions, the teaching and other hospitals associated with such schools, and institutions incurring expenditure on post-graduate medical education under arrangements made with the universities.

(12) In view of the large sums involved and of the fact that hospitals as well as university institutions are concerned, the opinion is expressed that the University Grants Committee should appoint an advisory panel of persons with expert current experience of medical education and teaching hospitals.

[Chapter 22, paragraphs 33-37.]

PART I—UNDERGRADUATE MEDICAL EDUCATION.

Chapter 1.

A GENERAL SURVEY OF THE PROBLEMS.

THE REPUTATION OF BRITISH METHODS OF MEDICAL EDUCATION.

1. As a nation we are justified in taking pride in the reputation of British medical practice and of traditional British methods of medical education. But the knowledge that the work that has been done in the past has generally been well done must not make us blind to the urgent need for wide and radical improvements, nor dilatory in meeting that need; it should be one of the sharpest spurs to the achievement of further progress.

2. We describe elsewhere the present arrangements for undergraduate medical training and for the registration of medical practitioners. It is sufficient to mention here only certain salient features. Before a student can qualify for admission to the Medical Register he must complete a course of training normally of not less than five years' duration. This course is divided into three parts, the pre-medical, the pre-clinical and the clinical. The student must pass a qualifying examination conducted by one of 27 licensing bodies, some of whom are concerned solely with the examination of medical students and the licensing of practitioners, whereas the others add to these duties the conduct of undergraduate medical training. Each of the medical schools for undergraduate medical students has a large degree of initiative and freedom in the framing of the course it provides.

3. The wide margin of liberty enjoyed by individual medical schools has been a source of strength to the British system of medical education. It has enabled the schools to develop their own particular potentialities and to carry out experiments, thereby facilitating the introduction of reforms throughout the system. We are in complete agreement with the General Medical Council, the medical schools and other of our witnesses, in maintaining that the individual freedom which the medical schools possess in academic matters is an asset, and must be fully preserved. "In the last limit it is essential to place trust in those actually engaged in teaching and research and to give their views and experience full weight in the evolution of medical education".*

THE AIM OF UNDERGRADUATE MEDICAL EDUCATION.

4. The aim of undergraduate medical education is to guide students to the development of those qualities of mind and character that will enable them when qualified to give maximum service to the community. The training must fit them to enter practice as general practitioners, and must also provide a sound basis upon which those who wish to become teachers and specialists can found the post-graduate training and experience which they will require. At the stage of his career when he passes from the direct influence of the medical school and is admitted to the Medical Register a student cannot be expected to possess in full maturity all the qualities one might expect to find in a doctor of several years standing; but the essential qualities should have been sufficiently developed to permit of their full ripening by later experience of life and medical practice.

5. In our opinion a general practitioner should possess a scientific foundation for his professional work and a proper outlook on the social aspects of Medicine

* Statement by Professor R. A. Peters, quoted in the memorandum of evidence received from the University of Oxford.

and the promotion of mental and bodily health. He should be competent to diagnose and treat all simple disorders, including the milder forms of mental ill-health, and should be capable of recognizing when a disorder is one with which he is not fitted to deal and of securing promptly the proper treatment for the patient. Able to observe accurately, reason logically and assess the claims of new knowledge, he should also possess a sympathetic understanding of people and their environment.

6. If medical students are to acquire these attributes, undergraduate medical training must "be organized and conducted so as to constitute a real discipline which will mould and develop the student's personality and character, reinforce his natural ability, stimulate to the highest degree his interest in his future professional work, and inculcate sound judgment and habits of industry, observation and application".*

THE CONDITIONS TO BE SATISFIED BY THE EDUCATIONAL ARRANGEMENTS.

7. If the training is to be a discipline of this nature the principal conditions that the educational arrangements must satisfy can be considered under four heads: (1) the full co-operation of students, teachers and the general public; (2) the nature and organization of the course of training; (3) the accommodation, equipment and teaching facilities that are required; and (4) the curriculum and examinations.

The full co-operation of students, teachers and the general public.

8. An active partnership of students, teachers and the general public constitutes the heart of the system of medical education. The success of the system depends upon the proper functioning of the partnership, which, in turn, is dependent upon the qualities of mind and character of students and teachers, their mutual attitude and the measure of collaboration which they receive from the general public.

(a) Students.

9. However well designed and conducted the training may be, it cannot produce successful results unless (i) in its organization and conduct it allows for the full and active participation of the students, so that their education proceeds as much by their own efforts to learn as by their teachers' efforts to instil knowledge into them, and (ii) the students are of suitable character and temperament and of an adequate standard of mental and physical fitness. General suitability for the arduous and responsible duties of a medical practitioner must be the criterion in the selection of students, and unsuitability the sole barrier to medical education. To a limited degree there is a discrimination against women students on the ground of sex, and in many areas lack of financial means is still a barrier to the adoption of a medical career. We make proposals later aimed at the abolition of these barriers.

10. For entry to a medical school, a sound general education of a standard at least up to that recognized for entry to a university should be a requirement to which no exception is ever made. "It is no doubt possible for a considerable amount of knowledge of a specialized kind to be acquired upon a relatively meagre groundwork of general education, but for the ordinary student a point is reached sooner or later, and more often soon than late, where all further advance is hampered, if not entirely prohibited, unless he has acquired the power of accurate expression and orderly thought".† The

* Memorandum of evidence from University of Edinburgh.

† The Final Report of the Royal Commission on University Education in London (1913)

evidence we have received shows that by the time they begin their medical studies, too large a proportion of present-day medical students have not acquired these powers. Premature specialization, such as occurs all too frequently under the stimulus of the existing arrangements for examinations and for the award of scholarships, appears to be the main cause.

11. The ideal educational background to the training in Medicine is undoubtedly a course of study for a university degree in another faculty. Although it is not generally practicable, more men might be encouraged to use this approach. At the present time, relatively few graduates in other faculties subsequently take up the study of Medicine. The cost and the long period which must elapse before the earning of a livelihood can begin are probably strong deterrents. We believe that it is in the highest interests of the community that more men and women who have pursued university studies in other branches of learning should enter the medical profession. Later we make proposals to encourage entry from this source.

12. The task of assessing aptitude, particularly for a profession such as Medicine, is one of great difficulty, requiring in those performing it experience, judgement and possibly a talent possessed by comparatively few. We are satisfied that the importance of designing the most efficient machinery for the selection of students is realized by the medical schools. The existing arrangements require the most careful review by the schools, particularly with regard to the extent to which special aptitude tests can be usefully employed. The experience gained from the methods employed in Canada and the United States of America, and the machinery now used for the selection of men and women to train for commissioned rank in the armed and auxiliary forces of the Crown, should receive close study.

(b) Teachers.

13. If the teachers are to play their appointed role in the educational partnership, their personal qualities are all-important. A medical school requires teachers of different types, interests and experience, but all should possess certain attributes.

14. The ideal teacher has a wide and sound knowledge of his subject. If he is a clinical teacher his knowledge of Medicine is allied to skill of a high order in medical practice. He has a keen interest in students, their development and their ideas, and an ability to inspire and guide them as well as to instil knowledge into them. The interest and initiative of students are best quickened and maintained in an atmosphere of original investigation and critical study, and the best teachers of Medicine are those who are actively interested in the advancement of knowledge and its application to problems of health and disease. Failure to secure teachers of the right type will make it well-nigh impossible to obtain first-rate doctors and a first-class health service.

15. Help and guidance in the acquisition of skill in the difficult and subtle art of teaching will enable an intending teacher to avoid much fruitless expenditure of time and effort in preparing himself for his important duties and will greatly assist him to make the most effective use of his personal qualities. In the past too little attention has been paid to the training of the teachers of medical students.

16. Besides possessing the requisite qualities and trained skill in their use, the teacher must also be in a position to devote much time and thought to his teaching duties and to scientific inquiry. Teaching and research are great time-consumers. Teachers of medical students must be able and willing to make their educational work their principal interest, or at least one of their main activities.

17. Though many teachers possess the necessary qualities for the work of training students, with few exceptions they are handicapped in making their full contribution to education. In the pre-clinical departments the main difficulty arises from understaffing, which causes the teachers to expend themselves unduly on routine administration and teaching, to the neglect of research work and ultimately to the detriment of their teaching.

18. Clinical teachers are hampered even more. As yet the number of whole-time clinical teaching appointments is very small. Almost all the clinical teachers are either unpaid, or receive only a small honorarium in respect of their teaching duties; they have to earn their living by consultant practice. "It has been left to their conscience to devote a certain proportion of their time to teaching; and in the main they have carried out this moral obligation extraordinarily well."* But inevitably their work as teachers has to be subordinated to the claims of private practice, and few have the time or energy to devote much thought to general educational problems or to engage in research. This state of affairs is wrong. The part-time teachers, who are well versed in the practical art of Medicine and are in contact with patients in their own homes, have an important contribution to make; and a large part of the clinical training of students must continue to be in their hands. It is, however, essential for the proper development of clinical teaching and for the advancement of Medicine that the whole body of clinical teachers should be enabled by various means, such as the creation of more whole-time teaching posts, the payment of salaries to part-time teachers in respect of defined obligations and the provision of suitably sized and staffed private patient blocks in the teaching hospitals, to spend more time in the medical schools and teaching hospitals.

(c) The general public.

19. Medical education cannot be properly conducted without the full co-operation of all sections of the public. Throughout his life every member of the community shares directly and indirectly in the benefits which medical science has brought to humanity. Whatever their wealth or status, all should regard it as a personal obligation to be willing partners in the furtherance of medical education and research. At present many people do not view the matter in this light. They are reluctant to be the subject of teaching when they are ill. There would be grounds for this reluctance if there were evidence that by "being taught upon" a patient suffered in any way. Such is not the case. The paramount duty of a medical practitioner engaged in teaching, as of every other medical practitioner, is to his patient. He does not teach on one of his patients if the latter's physical or mental state makes such a course undesirable from the standpoint of the patient.

20. It is not, however, merely a question of absence of harmful effects to the patient. There is convincing evidence that the care and treatment of the sick reaches the highest standard when it is associated with the conduct of teaching and research, and when every step in treatment must be fully and openly discussed. To take one example, all the local authority organizations that have submitted evidence to us have advocated the greater use of local authority hospitals for teaching and research purposes on the ground that the care and treatment of patients in those hospitals would be improved thereby. In its memorandum of evidence the County Councils Association made the following statement . . . "The presence of a medical school improves the medical facilities available for the inhabitants of the district in which it is situated . . . A medical school is desirable even more in the interests of the patients than of the students."

* Memorandum of evidence from the General Medical Council.

21. The Association recognized that it is not possible without detriment to the quality of the training, to allocate medical students to every hospital, even to every large general hospital; but the carrying out of the proposals which we make later in the interests of medical education will secure that the beneficial influence which arises from the association of hospitals with teaching and research will be felt directly over the largest possible area of the country.

Nature and organization of the course of training.

22. The following general principles concerning the nature and organization of the course of training have been fully supported in evidence.

(a) **By its nature and standard the training should provide the student with a university education on broad and liberal lines.** A mere technical training will not fit a student to perform his future professional work properly. He must have a university education if he is to enter medical practice with an outlook beyond the confines of an examination syllabus, with a well-disciplined mind, wide human interests, and an intelligence able to move with the progress of human knowledge. Under present conditions, too large a proportion of medical students do not receive such an education. Among the reasons are deficiencies in the arrangements in many of the medical schools, the failure or inability of the students to make full use of the available opportunities, and the dominance of examinations.

(b) **Throughout the course the essential unity of Medicine should be observed and the teaching in the various stages and subjects so organized that the whole becomes a smooth and logical development.** In the past there has been a strong tendency, recognized but not corrected, for the course to consist of instruction in what may seem to a student to be a series of isolated subjects having little relation to one another. The bearing of anatomy and physiology and the other basic sciences on clinical studies has been obscured, while the latter have tended to be conducted in water-tight compartments, frequently in a more or less haphazard order. To some extent this tendency is due to the growth of specialization in staff and in technical methods. Specialization has been enforced by the growth of knowledge. Provided that it is not carried too far, it is in the interest of patients; but it has created a major problem in undergraduate medical education. The fact that to an increasing extent medical students are taught by specialists renders necessary a deliberate and well-planned ordering of courses, so that the student can easily correlate the knowledge he acquires in different classes and not lose the sense of unity. Involved is a proper planning of the curriculum, and the organization of the teachers on lines conducive to the fostering of co-operation among them in respect of the subject matter and methods of teaching. The responsibility for the organization and direction of the teaching can be adequately fulfilled only if it is in the hands of whole-time university teachers.

(c) **While being primarily practical in character, the training should give the student a clear understanding of the constantly developing scientific basis of Medicine.** Of a medical practitioner it should be possible to say:—

“ Much had he read,
Much more had seen; he studied from the life,
And in th’ original perus’d mankind ”*

But his perusal of mankind must be on scientific lines. It is more likely to be so if the whole of his training has been carried out in an atmosphere

* Art of Preserving Health, by John Armstrong, 1744.

of scientific inquiry, and the majority of his teachers are engaged for part of their time in some form of research work. For the benefit of each, teaching and research should normally proceed together. At the present time the majority of the teachers, particularly in the clinical subjects, have neither the opportunity nor the facilities which they should have for the conduct of original investigations.

(d) **Throughout the course the main emphasis should be on the inculcation of fundamental principles and methods** rather than on the implanting of a mass of purely factual knowledge, much of which the student will soon forget. If he has thoroughly assimilated principles and methods, he will be capable, after qualification, of obtaining and revising, from contacts with specialists and with the aid of post-graduate courses, the detailed knowledge he will require in practice. The British Medical Association has informed us that many practitioners find difficulty in keeping abreast of modern medical progress because they did not acquire a sufficient foundation of fundamental principles in their student days. Too often in the past the emphasis during the medical course has been on the acquisition of a large number of facts, with the result that there has been too high an appraisal of memory and too little attempt made to develop habits of independent thought and judgement. Short-sighted methods on the part of some teachers and examiners are partly responsible, but the main cause is a grossly overcrowded curriculum. "It is altogether too burdensome to the student and to his teachers, it is also quite unnecessary, to attempt to cover the whole field of present day knowledge of disease and its management; to attempt it defeats the purpose of sound education by overcrowding time and mind, robbing the student of all chance of contemplation and by default rendering the basis of his beliefs unsound".† A ruthless pruning of the curriculum is urgently necessary.

(e) **In deciding the importance that should be attached to the various subjects and the type of instruction that should be given, the bias should be towards the needs of the future general practitioner.** All parts of teaching or of clinical practice that relate only to the fields of work of the clinical or laboratory specialist should be reserved for post-graduate education, and adequate attention should be given to those problems which constitute a large part of a general practitioner's work. Specially important in this connexion are the prevention of disease and an appreciation of the part played by social environment in health and sickness, diagnosis of acute medical and surgical conditions, child health and infectious diseases, the recognition of emergencies and of malignant diseases, the milder forms of mental and nervous disturbance, minor ailments, chronic sickness, rehabilitation. Broadly speaking these subjects do not receive the attention they should at the present time. The basic training should be equally valuable for the student who has the inclination and ability to become a specialist.

Accommodation, equipment, research and teaching facilities

23. Teachers of ability working with good students are capable of achieving good results in spite of unsatisfactory working conditions; but normally, adequate accommodation, suitable equipment and satisfactory arrangements for other facilities necessary for teaching and research are essential if the best results are to be obtained. We shall consider this problem in some detail later. At this stage we need only record that in the course of our inquiry we have found many instances of deficiencies which are having hampering and adverse effects on the training of students.

† Memorandum of University College Hospital Medical School.

Curriculum and Examinations.

24. Although we were not charged directly with the duty of reviewing the medical curriculum, we were asked to give full consideration "to any questions affecting the organization of medical teaching." Organization is largely dependent upon curriculum. The development of a national health service demands, and at the same time presents, unique opportunities for improvements in medical education. Those opportunities will be largely lost if they are not accompanied by appropriate reforms in the curriculum. In considering questions of organization we have, therefore, felt justified in giving close thought to the main changes which in recent years have been advocated, but not achieved, in the curriculum. We have been encouraged to follow this path by the very large measure of agreement we have discovered, at least on general principles, about the main changes that should be made. These changes, which relate not only to modifications in the content of the syllabus but to alterations in emphasis and approach, will not be easy to effect in all cases, but we are convinced that, given agreement on principles and good will on the part of all concerned, they can be made.

25. Our review of the organization of undergraduate medical education has compelled us to consider the system of examinations for admission to the Medical Register. If medical practitioners of the type required are to be produced, the training which medical students receive and the examinations they are required to pass must be complementary and in harmony. The examination must be the servant and not the master of the training. Reforms in education will be largely sterile unless the system of examinations conforms with them. Under existing conditions the training in some schools is hampered by the examination arrangements and requirements.

Chapter 2.

THE MEDICAL SCHOOLS.

A MEDICAL TEACHING CENTRE FOR UNDERGRADUATE STUDENTS.

1. Underlying our recommendations on undergraduate medical education is the conception of a university medical teaching centre, consisting of a university medical school, a group of teaching hospitals, and such clinics of the health services of the district surrounding the medical school as should be used for teaching purposes. This conception arises from our belief that, nowadays, the educational facilities and atmosphere required for the production of the type of doctor needed by the community can be obtained only by so interlocking the administration and work of a medical school and of the hospitals and health service to which the school must have access that they function as a unity in the tasks of education.

2. The greatest possible measure of co-operation should exist between the governing bodies responsible for the constituent parts of a medical teaching centre. While each retains full authority in its own field of responsibility, all should be actuated by the knowledge that they share the duty of furthering medical education and research to the best of their ability. In this and several of the chapters that follow we consider various aspects of our conception of a medical teaching centre.

A MEDICAL SCHOOL SHOULD BE AN INTEGRAL PART OF A UNIVERSITY.

3. We recommend that in future only medical schools that are integral parts of universities should undertake the training of undergraduate medical students. To agree to the training of medical students in institutions which are not parts of universities is to support the belief that doctors can be produced in intellectual circumstances that are not the best that the community provides. We cannot accept such a belief. Medicine is a branch of human thought and activity that demands and provides opportunities for the fullest development of humanistic and scientific talents. It is a branch of higher learning, and the most favourable training ground for those who follow it is in the recognized centres of higher learning—the universities. We are certain that it is as full participants in the life of universities, having close associations with those following other branches of learning, that teachers of medical students will receive the strongest stimulus to give of their best, and medical students will be encouraged to develop those qualities of mind and character that make a good doctor. A university medical school presents the most favourable conditions for maintaining and improving educational standards; for securing a consistent selection of good students; for attracting teachers of the highest calibre to the responsibilities of medical education, and for keeping alive their enthusiasm. It provides the best means for effecting essential contacts between teachers of Medicine and persons working in other spheres of learning, particularly the natural and social sciences; for ensuring the provision of accommodation and equipment of a standard and on a scale that is required; and for diffusing beneficial educational influences throughout the health and hospital services.

4. The trend of progress in the British system of medical education has been towards the concentration in the hands of university institutions of responsibility for conducting the training of undergraduate medical students. The time has come to proceed to the final stage of this evolutionary development.

5. Our recommendation that undergraduate medical education should be confined to university medical schools involves either the absorption of the existing non-university medical schools by the appropriate universities, or the cessation of undergraduate teaching by those schools. The recommendation also applies to any new medical school that it may be found expedient to establish in future. Any such school should be an integral part of a university, situated in an educational centre.

EXISTING UNIVERSITY AND NON-UNIVERSITY MEDICAL SCHOOLS.

6. At the present time, all but four of the medical schools in Great Britain are university medical schools in the sense that they are faculties, colleges or schools of universities. Of the four non-university schools, one, the West London Hospital Medical School, is in London, and three are in Scotland, two, the Anderson College of Medicine and St. Mungo's College, being in Glasgow, and the third, the School of Medicine of the Royal Colleges, in Edinburgh.

7. To avoid creating a wrong impression at this stage, it is advisable to note a point we shall have to consider more fully later. It is that the relations of the authorities, staff and students of the medical schools of the University of London with the University and with the teachers and students of other colleges and schools of the University have not been as close as we, in company with the University and the majority of the medical schools, consider necessary and practicable.

8. The annual returns submitted by the universities of Great Britain to the University Grants Committee show that, in the academic year 1938-39, the *total* number of full-time undergraduate medical students* at universities or schools of universities was 11,554†, 9,728 being men and 1,826 women. These students constituted nearly one-quarter of the total number of full-time students in all faculties at the universities in Great Britain. The following table shows the distribution of these students with the corresponding figures for 1942-43:—

	1938-1939			1942-1943		
	Men	Women	Total	Men	Women	Total
Universities in English provinces and Wales	2,879	708	3,587	2,774	1,011	3,785
Medical Schools of the University of London	4,513	551	5,064	3,814	604	4,418
Universities in Scotland	2,336	567	2,903	1,980	715	2,695
	9,728	1,826	11,554	8,568	2,330	10,898

The numbers at the individual medical schools are shown in Appendix B.

9. Excluding students attending occasional classes, the medical students of the three extra-mural schools in Scotland preparing in 1938-39 for a registrable qualification numbered 1375, of whom over 40 per cent. were from foreign countries. The West London Hospital Medical School opened in 1937 and in 1938-39 had 38 undergraduate students.

10. Besides looking at the total number of students in training in a given year, it is useful to look at the figures for *annual entry* to the pre-clinical part of the course. During the war the number of students that medical schools have been allowed to admit has been in accordance with agreed quotas. In the case of men students these quotas have been based without reductions upon the average annual number of students admitted in the three years 1936-7 to 1938-9, and in the case of women upon the average admissions during the years 1937-8 to 1939-40. The total quotas for 1942-43 for the different groups of medical schools were as follows:—

	Men	Women	Total
Universities in English provinces and Wales	654	179	833
Medical Schools of the University of London... ..	590	142	732
Universities in Scotland... ..	441	126	567
<i>Total</i> university medical schools	1,685	447	2,132
Non-university medical schools... ..	95	23	118

11. It is interesting to refer to one further set of statistics. From the analysis, described in Appendix C, of the medical practitioners admitted to the Medical Register in the five years 1933-37 inclusive, it appears that of the 6,494 practitioners who took the *whole course* of training at medical schools in Great Britain, approximately one-fifth had taken their clinical training under the aegis of universities in the English provinces and Wales, just over

* Dental students, being outside the scope of our enquiry, have been excluded.

† This figure does not include 18 students studying biology, chemistry and physics as pre-medical subjects at three University Colleges (Exeter, Nottingham and Swansea).

two-fifths at medical schools of the University of London, roughly one-third at Scottish universities, and one-twentieth under the aegis of the non-university schools*.

12. An explanation of the grouping of the medical students of Oxford and Cambridge Universities for the purposes of these figures is desirable. In paragraph 8 the number of students taking their pre-clinical studies at Oxford and Cambridge has been included in the figures for universities in the English provinces and Wales. Students of Oxford and Cambridge usually take their clinical studies at other medical schools and those who were doing so have been included in the figures for the latter schools (e.g. those taking the clinical part of the course at the London schools appear in the figures of those schools). The figures in paragraph 10 relate to the admission of students at the beginning of the medical course. Therefore, the total number of medical students that Oxford and Cambridge could accept in 1942-43 is included in the figure for universities in the English provinces and Wales. In calculating the figures given in paragraph 11, practitioners have been classified according to the medical school to which they were attached for their clinical studies.

GOVERNMENT OF EXISTING UNIVERSITY MEDICAL SCHOOLS.

13. In constitution and government, the medical schools that are faculties, colleges or schools of universities do not conform to a common pattern. They fall into five distinct groups. Each of the schools in the first group is the faculty of Medicine of its respective university, comparable in its administration to other faculties of the university. These schools are those in the English provinces (except King's College University of Durham) and the four Scottish universities. The second group consists of University College and King's College, London, both of which are incorporated in the University of London. In the third group are King's College, Newcastle-upon-Tyne, a constituent college of the University of Durham, and the University College of South Wales and the Welsh National School of Medicine, which are constituent members of the University of Wales. The fourth group is composed of the general medical schools of the University of London, with the exception of St. Bartholomew's Hospital Medical College and the London (Royal Free Hospital) School of Medicine for Women. Broadly speaking, these schools are departments of their parent teaching hospitals. In view of this fact they have sometimes been referred to as "hospital medical schools". St. Bartholomew's Hospital Medical College and the London School of Medicine for Women constitute the fifth group; each is a general medical school of the University of London and each is legally incorporated as an educational institution.

14. There are two important features which all the existing university medical schools have in common. The first is that all, though in varying degree, are subject to university influence and control. The second is that grants from public funds are made in the first instance to the university of which the medical school is a part and are apportioned by the authorities of the university.

* It has to be noted that the figure for the Scottish extra-mural schools does not include 152 practitioners with foreign qualifications who were registered by virtue of the Scottish Triple Qualification obtained after 1 year's course of training in Great Britain. Further, that 162 persons who obtained the Scottish Triple Qualification during the period 1933-37, most of whom presumably had trained at the Scottish extra-mural schools, have not so far applied for admission to the Medical Register and have not, therefore, been included in the analysis.

15. Apart from the views expressed in chapter 3 paragraph 14, below, we do not find it necessary, from the point of view of the organization of medical education, to propose any changes in the form of government of the various university medical schools, except in the case of those in the fourth and fifth groups. A broad outline of the scheme of government of the schools in the first three groups is given in Appendix D.

THE GENERAL MEDICAL SCHOOLS OF THE UNIVERSITY OF LONDON.

16. These schools constitute the fourth and fifth groups and it will be convenient to consider them together. The fourth group consists of ten general medical schools of the University of London*, none of which has a legal existence apart from its parent teaching hospital. Each is an integral part of the parent hospital, with buildings and sometimes maintenance services provided by the hospital governors. Although each school is administered by a committee or council, variously named, and its finances are kept separate from those of the hospital, the ultimate controlling power and responsibility for the affairs of the school rest with the governing body of the parent hospital.

17. The two schools (St. Bartholomew's Hospital Medical College and the London School of Medicine for Women) in the fifth group are also general medical schools of the University of London, but unlike those in the fourth group they are separate legal entities as educational institutions. St. Bartholomew's Hospital Medical College began as a part of St. Bartholomew's Hospital but obtained a charter of incorporation in 1921. The London School of Medicine for Women has been a separate entity since its inception in 1874. In 1877 it entered into an agreement, which still subsists, with the Royal Free Hospital, whereby that hospital became the main teaching hospital of the school. Although separately incorporated these schools maintain the closest relations with their principal teaching hospitals.

Development of medical education in London.

18. In the main, the present arrangements in the schools in the fourth group are attributable to the manner in which medical education developed in London. Traditionally, such education was based upon certain large voluntary general hospitals whose status was that of charities for the relief of the sick poor. At these hospitals the chief clinical services were provided without remuneration by visiting physicians and surgeons who earned their living by private practice outside the hospital. These physicians and surgeons were allowed to instruct private pupils in the hospital wards. Originally, such pupils, in addition to receiving this instruction, which followed upon apprenticeship to an apothecary, would be studying anatomy at a private school independent of the hospital. As organized teaching developed from this apprenticeship system, the hospitals began to take formal notice of the pupils, registering them, and providing class-room and dissecting-room accommodation, which later grew into complete medical school buildings. The organization of the medical school probably originated with committees of the hospital staff who found it advantageous to pool the pupils' fees and the teaching work instead of maintaining the system of personal apprenticeships. Even after the medical school buildings had been provided by the hospital, it was frequently the practice to meet the general expenses of the school

* These are Charing Cross Hospital Medical School, Guy's Hospital Medical School, King's College Hospital Medical School, London Hospital Medical College, Middlesex Hospital Medical School, St. George's Hospital Medical School, St. Mary's Hospital Medical School, St. Thomas's Hospital Medical School, University College Hospital Medical School and Westminster Hospital Medical School.

from the pooled fees of the students and to distribute any balance as dividend among the clinical teachers, whose position was rather that of partners than salaried staff.*

19. In three cases, namely, Charing Cross Hospital Medical School, King's College Hospital Medical School, and University College Hospital Medical School, the school had a different origin. A short note on the history of these three schools is set out in Appendix E.

20. Up to the end of the nineteenth century the medical schools in London had prepared students for the examinations of the various licensing bodies, including those of the University of London, but they had no direct relations with the University, apart from being recognized as institutions at which could be obtained approved courses of instruction leading to the University's examinations. After the reconstitution of the University in 1900, the medical schools became "Schools of the University". They continued, however, to be more closely associated with their parent hospitals than with the University, and on occasion the hospital approach to questions of medical education tended to differ from that of the University. With the passage of time and particularly since, and as a result of, the latest reconstitution of the University of London in 1929† there has been a slow but steady strengthening of the ties between the medical schools and the University. The influence of the University has gradually increased. Nowadays relations are much more cordial than they have ever been; but they are still far from being as close as is possible or as is desirable for the well-being of both the University and the schools. There is recognition on the part of the schools that closer contacts with the University would be beneficial. The following extract from the memorandum of evidence submitted by St. Thomas's Hospital Medical School sums up the prevailing view:—

"It is our considered opinion that in the future the University should play a greater part in the life of the School. The help of the University is necessary for the development of education and the formulation of policy. Further, a close association should assist in producing amongst the staff and students a broader view of academic work and encourage contacts with men in other faculties."

21. The opinion is widely held that both the medical schools and the University have contributions to make to the forging of closer ties. We consider later what these contributions might be. First, however, it is necessary to mention briefly certain of the administrative arrangements in the University of London and the contacts that at present exist between the University and the medical schools.

Powers of the University of London.

22. The chief governing and executive body of the University of London in all academic matters is the University Senate. Subject to the powers reserved to the University Court, the Senate is empowered to take such measures and to act in such manner as shall appear to it best calculated to promote the interests of the University as a place of education, learning and research.

23. The control of the finances of the University is in the hands of the University Court. This body represents the University in all negotiations for grants from public bodies and no university body or school of the University may, without its consent, (i) apply for or receive any money from any public body, otherwise than through the University Court, (ii) make

* This paragraph is based on an historical outline included in the memorandum of evidence submitted by the University of London.

† Under the University of London Act 1926.

any public appeal for money, or (iii) accept any benefaction which, in the opinion of the Court, is or will become onerous to the finances of the University. The Court also determines the allocation of all funds at the disposal of the University. Among its powers are (i) the power to require from any school of the University any information which it considers necessary or desirable for the performance of its duties, and (ii) to prescribe the manner and form in which, and the times at which, any accounts or estimates of the school shall be submitted to it.

24. The schools of the University are open to inspection by the University at regular intervals and each is required by the university statutes to give a written assurance to the Senate that it will permit the Senate, in consultation with the governing body of the school, to determine which posts at the school shall be held by "appointed teachers", that is to say, teachers having the status or title of university professor or reader. The Senate, however, has no power of interference with the courses of study provided in any school for students other than those (known as "internal" students) who are pursuing a course of study for a university degree or diploma or undertaking an approved course of research.

25. In the case of professors and readers the duties, tenure, remuneration and conditions of service, retirement and superannuation are determined by the Senate, in consultation with the governing body of the school at which the appointment is held. No appointment to a professorship or readership can be made by the Senate without previous consultation with the governing body of the school at which the post is to be held, and the consent of such governing body to the appointment is necessary if the governing body is providing the whole of the salary. Normally, the selection is in the hands of a board of advisors consisting of representatives appointed by the University and the school, those appointed by the University including one internal and two external experts.* In the general medical schools the number of "appointed" teachers is a very small proportion of the total number. The large majority of the teachers in these schools are selected without reference to the University; but they may subsequently have the status of teachers of the University conferred upon them by the Senate, under the title of "recognized" teacher and subject to such limitations and conditions as the Senate thinks fit.

Proposed incorporation of the undergraduate medical schools.

26. We take pleasure in paying tribute to the great contributions which the governors of the teaching hospitals in London have made to the growth of medical education. The service they have rendered and the traditions they have helped to nurture are a source of just pride and should be a stimulus to new endeavour. While we gladly recognise past achievements we must look to the tasks ahead. The progress of Medicine and the needs of the community appear to us to demand a reorientation of the manner in which teaching hospitals make their contribution to education. To a great extent the changes are a logical development from the present arrangements. In view of their influence upon the health of the people, and their interest in medical education and research, and in the light of the assurances that we have received, we feel sure that the governors of these hospitals will facilitate the changes and will continue to assist the medical schools with the same cordiality, enterprise and energy as in the past.

* An internal expert is an "appointed teacher" (or, in exceptional cases only, a "recognized teacher") of the University. An external expert is one who is neither an "appointed" nor "recognized" teacher of the University and who does not "hold a paid office in any Institution connected with the University in which the office of Teacher is held by any Appointed or Recognized Teacher of the University."

27. In order that the undergraduate medical teaching centres established in London may have opportunities for future development equal to those which we anticipate will be enjoyed by teaching centres in other parts of the country, we believe that it is necessary (i) for all the undergraduate medical schools of the University of London to become incorporated as separate legal entities, like St. Bartholomew's Hospital Medical College and the London School of Medicine for Women, and (ii) for the University of London and its medical schools to take all possible steps to strengthen their associations and to make them more active and mutually more advantageous.

28. There are several reasons in favour of the incorporation of the medical schools. First, by becoming separate legal entities with independent governing bodies, the status of the medical schools as educational bodies will be increased and due emphasis will be given to the fundamental importance of medical education to the national health service. Second, the schools will be placed in a better position to secure the proper functioning of their teaching centres. Though primarily associated with one hospital, each medical school will need to be linked with other hospitals and with various branches of the health service. These associations are likely to be established and developed more easily and satisfactorily if the authority acting for the school is concerned solely with educational work and is not also the governing body of one particular unit of the hospital service or subject to control by such body. Third, the task of bringing the University and the schools into closer relation will be facilitated. Owing to the inevitable dispersal of the London medical schools over a fairly wide area, the establishment of closer relations will in any case be difficult; but it will be easier for the University to spread its cloak if the parties directly involved are purely educational bodies. A fourth reason for incorporation arises from our recommendation regarding the machinery for distributing grants made from public funds in aid of medical education, including grants in respect of educational facilities provided by the teaching hospitals. To assist the medical schools in the fulfilment of their educational responsibilities, we consider that they should have power to hold funds in their own right and that public grants for any teaching centre should be received by the medical school of the centre. Bearing in mind the prospect of larger grants for medical education, we think that if a medical school is to perform these duties in respect of grants, it must itself be a legal entity as an educational institution with appropriate freedom to develop educational policy.

29. We therefore recommend that the general medical schools of the University of London that are not separate legal entities should become so. With a view to the saving of time and expense we suggest that this change in their legal status should be effected by an omnibus piece of legislation.

30. Perhaps some may fear that incorporation of the medical schools may impair the good relations between the schools and their parent hospitals. We are satisfied that such fears should be groundless. The representatives of St. Bartholomew's Hospital Medical College, reviewing the experience of 22 years since the college obtained its charter of incorporation, made no mention of difficulties having arisen but stressed the positive advantages that had accrued, including the fact that the possession of its own charter had assisted the college in obtaining financial support. They explained that although the hospital and college were now legally and financially separate they remained very closely associated in practice.

Linkage of university, medical school and teaching hospital.

31. The arrangements for the training of medical students must secure close working relations between a medical school and the hospitals in which students obtain clinical experience. The need is equally great in the

case of the London schools as in the case of medical schools in other parts of the country. Outside London the problem is to discover how best to harmonize, in the interests of medical education, the powers and duties of the universities* and the governing bodies of the teaching hospitals. In London, the problem is to bring about harmonious co-operation between the University, its medical schools and the governors of the hospitals providing clinical teaching facilities. In essence the two problems are the same.

32. In the opinion of certain of our witnesses the only satisfactory way to secure the desired degree of co-operation in policy and activities is to have a common governing body for both medical school and parent teaching hospital. Those of this persuasion who were interested in medical schools outside London favoured the conversion of parent teaching hospitals into "university" hospitals. Those concerned with the medical schools in London advocated a common governing body for medical school and hospital, the educational interests (i.e. the university, the teachers and others mainly concerned with the activities of the medical school) having a majority representation, but public and financial representation also being adequate. We discuss these proposals in the next chapter which deals with questions arising out of the provision of facilities for the clinical instruction of students. We merely wish here to record our conclusion, reached after a careful assessment of the evidence, that the better course is to have independent governing bodies for medical school and parent teaching hospital, with provision for the linking of the two institutions in various ways, particularly by the interchange of representatives between the governing bodies and by the adoption of joint machinery for the selection of staff.

33. In our view the governing body of any medical school of the University of London, while remaining small enough for the efficient discharge of business, should include, in addition to representatives of the teaching staff of the school and of the governing body of the parent teaching hospital, a small number of representatives of the University of London and, if possible, of the other hospitals associated with the medical school for teaching purposes.

34. The inclusion of representatives of the University of London on the governing bodies of the medical schools will be one of the means whereby University and medical schools can be brought into closer co-operation. At the present time the University is represented on the school committee (or equivalent body) of only three of its twelve medical schools, namely, King's College Hospital Medical School, the London School of Medicine for Women and St. Thomas's Hospital Medical School.

35. The medical schools concur in the view that the University should be represented on their governing bodies. It is generally desired that these representatives should bring to the medical schools the atmosphere of the University and should play an active part in formulating the policies of the schools. Some of the schools have referred to the desirability of the University representatives being well versed in medical education, and interested in the application of educational principles in the teaching of Medicine. When we discussed this question with representatives of the University we were informed that the University was in favour of being represented on the governing bodies of the medical schools; but reference was made to the difficulty of finding suitable persons who could give the necessary time to the work. We recognize that the task may not always be easy, but we find it difficult to believe that, from among the large number of men and women

* In the case of the University of Durham, the powers and duties of the University and of King's College, Newcastle, and in the case of the University of Wales, of the University and of the Welsh National School of Medicine.

distinguished in Medicine and the allied sciences and associated with the University, the University Senate will be unable to enlist the relatively few representatives who will be needed.

36. The bringing of representatives of the University into the councils of the medical schools will not alone be enough. There is an urgent need for the development of the corporate life of the University. For their mutual advantage, the administrators and teachers of the medical schools need to be in closer touch with administrators and teachers of other colleges and schools, and to take a larger share in the general life of the University, and the conduct of its affairs. Likewise, medical students would benefit from better contacts with the rest of the student body of the University. A consistent effort to this end should be made. The kind of relationship that can and ought to exist between the University and schools will take time to mature; but when it is fully established not only the medical schools, but the whole University will be enriched. The need is realized, the time is ripe for action. We have no doubt that those charged with the direction of the affairs of the University and the medical schools will be equal to the opportunity. We do not disguise the fact that difficulties, and at times, disheartening apathy, may be encountered, but we see no reason why the objective should not be attained.

37. We have received from the medical schools a number of suggestions regarding action which they hope the University authorities may be able to take. We mention certain of them in Appendix F, in some cases without comment, since to have attempted to reach conclusions on them would have taken our enquiry far outside its appointed scope. We feel sure that these suggestions illustrate the spirit that is growing in the medical schools and will receive the sympathetic consideration they warrant. We wish particularly to support the suggestion, mentioned in paragraph 1 of the Appendix, that an officer should be appointed to act, under the direction of the Principal of the University, as liaison officer between the medical schools and the University.

THE FUTURE OF THE NON-UNIVERSITY MEDICAL SCHOOLS.

38. The adoption of our recommendation that, in future, undergraduate medical training should be conducted only in university medical schools will involve either the absorption of the four existing non-university schools by the appropriate universities or the cessation of undergraduate training by those schools. It is, therefore, desirable that we should report on our inquiry into these schools.

The extra-mural schools in Scotland.

39. The Scottish extra-mural schools are the Anderson College of Medicine, and St. Mungo's College, in Glasgow, and the School of Medicine of the Royal Colleges in Edinburgh.

40. Anderson College had its origin in an institution created in 1799 under the will of John Anderson, M.A., F.R.S., Professor of Natural Philosophy in the University of Glasgow. The institution, which was known as "Anderson's University," had a science as well as a medical side. The science side has become the Royal Technical College of Glasgow, which is now affiliated to the University of Glasgow. The medical side in 1866 was removed to new buildings, placed under a separate governing body and became known as the Anderson College of Medicine.

41. In 1875 the Glasgow Royal Infirmary obtained a supplementary charter which gave it powers to afford facilities and accommodation for the

teaching of medicine, surgery and collateral sciences. In the next year, the Royal Infirmary Medical School was inaugurated and in 1889 St. Mungo's College was incorporated under the Companies Acts "to absorb and continue the Royal Infirmary Medical School."

42. The School of Medicine of the Royal Colleges is a corporate body consisting of lecturers recognized by the Royal College of Physicians of Edinburgh and the Royal College of Surgeons of Edinburgh.

43. These three extra-mural schools have played an important part in the development of medical education in Scotland. Their greatest service was rendered during the last century. In those days, owing to the nature of the training and the methods by which it was conducted, the extra-mural schools were able to parallel successfully the courses of training provided by the university medical schools. Their fees were lower than those of the universities and they attracted to their service many able and ambitious young graduates. The medical curricula of the universities allowed considerable freedom in the arrangement of classes and it was quite a common practice for students of the university medical schools to attend some courses of instruction in the extra-mural schools, either instead of, or in addition to, the corresponding courses in the university schools.

44. At that time, in both the university and extra-mural schools, the basic form of teaching in most subjects of the medical curriculum, apart from simple laboratory work in chemistry and biology, work in the dissecting room, and the mixing of medicines, was the formal lecture. As a rule, the lectures were carefully prepared and ably expounded. The professor himself did almost all the teaching, departmental lecturers and assistants being very few. This fact is well illustrated from the Universities (Scotland) Act, 1858. Under the financial provisions of that Act the faculty of Medicine of the University of Glasgow was to consist of ten professors, but only three assistants, of whom two were in the department of chemistry. Not having any opportunity to teach in the university schools, the ambitious young graduate of the nineteenth century turned to the extra-mural schools. The rostrum there gave him the opportunity of training himself to become an efficient teacher. All the equipment that he needed was some diagrams and a blackboard, and the teaching experience which he gained might later enable him to secure appointment to a university chair.

45. Conditions nowadays are very different. In the university medical schools in Edinburgh and Glasgow, as in the schools in other parts of the country, the university professor, who did almost all the teaching in his subject, has been replaced by a department consisting of a professor with a team of lecturers and assistants. To show the difference from the position in 1858 let us note the staff in the faculty of Medicine of the University of Glasgow in the current academic year. Instead of only ten professors and three assistants for which provision was made in 1858, there are now twenty professors, seventy-three lecturers and fifty-five assistants. The professors and the other members of the staff of the university schools are encouraged to undertake research work and are provided with facilities for doing so. One result of the growth of these university departments has been that, nowadays, the abler of the young medical graduates tend to seek appointments in the university schools in preference to teaching in the extra-mural schools.

46. During the present century the pattern of the medical curriculum has become more closely ordered and we recommend an ever closer integration. Under these conditions the use of the extra-mural schools by university students has been very much reduced and will continue to decline. The present enrolment of these students is chiefly for courses in such subjects as

ophthalmology, dermatology, and oto-laryngology in which a series of clinical demonstrations in the appropriate hospital is associated with a short course of lectures. A certain number of students, who have failed in university examinations in pre-clinical subjects and been required to produce evidence of further study before re-appearing for examination, may make use of extra-mural classes. If such revision courses are necessary, they should be provided by the universities.

47. The courts of the Universities of Edinburgh and Glasgow have already taken steps to curtail the recognition of "extra-academical" teachers. The validity of courses conducted by such teachers for purposes of graduation in the University was originally forced upon the University of Edinburgh by the Town Council of that city in 1843. The power of the Town Council to compel submission by the University was contested in the Scottish Law Courts but was enforced in 1855, after an appeal to the House of Lords. This recognition of extra-academical teachers was continued as one of the permissive powers granted to the courts of the universities in the Universities (Scotland) Acts, 1858 and 1889. The University of Edinburgh has not granted any recognition to extra-academical teachers since 1932 and the University of Glasgow has not done so since 1937. Both universities have announced their intention of not granting any further recognition save in very exceptional circumstances. Such being the case the future of the extra-mural schools must be considered from exactly the same angle as any other medical school, namely from the standpoint of the medical students who take the whole of the course of training under their aegis. There is no doubt that, looked at from this angle, the extra-mural schools are of a lower standard than other schools in the country.

(a) **Teachers.**

48. The memorandum of evidence of the Royal College of Physicians of Edinburgh states that after 1918 the competition for teaching in the extra-mural school of that city became less keen. This change soon led to difficulty in finding staff. In the current academic year in Glasgow the professors of medicine and surgery in one extra-mural school had retired from the active staff of their Infirmary before 1939: in the other the professors of those subjects have reached the grade of assistant physician and assistant surgeon of the Infirmary but are not yet in charge of wards. In one school the professor of midwifery is an assistant obstetric surgeon on the staff of the Royal Maternity Hospital. In the other the chair of midwifery has been vacant since 1936 when the professor resigned to become assistant to the Muirhead Professor in the University: his predecessor had resigned two years before to become assistant to the Regius Professor. These examples illustrate the difficulty of correlating systematic and clinical teaching in the extra-mural schools.

49. There has always been difficulty about the teaching of pathology in the extra-mural schools of Glasgow. In the Anderson College there has never been a professor of pathology. When four new chairs in medicine, surgery, midwifery and pathology were founded in the University in 1911, the Governors of St. Mungo's College undertook to contribute £600 annually to the salary of the new Notman Professor of Pathology. No stipulation was made that the students of St. Mungo's College should have access to the new university department and the absence of such a provision suggests that St. Mungo's College did not then intend to continue as an independent school. The Notman Professor is pathologist to the Royal Infirmary and the Managers of the Infirmary have insisted on his compliance with a rule of the Infirmary that "the Pathologist shall give annually, to all students who apply, one or more courses of lectures in pathology, conjoined with practical

and microscopic demonstrations." Under this extremely wide provision the extra-mural students of Glasgow have had free access to university teaching in the Royal Infirmary. Their presence in the department, which has fairly limited accommodation, has excluded a considerable number of university students who wished to take their courses in pathology in that department.

When the University and the extra-mural schools agreed in 1939 to a quota of annual entrants to the medical schools of Glasgow, the University agreed to allow the admission of a proportion of the extra-mural students to the university department of pathology at the Western Infirmary. The extra-mural schools in Glasgow are still entirely dependent on the two university professors for the teaching of pathology.

50. The procedure for appointing teachers, at the extra-mural school in Edinburgh is different from that at the Glasgow schools. If a fellow of the Royal College of Physicians of Edinburgh wishes to teach in the school on a subject of medical interest he applies to the College for permission to do so. He is then required to attend for formal interview by a committee appointed by the council of the College. At this interview he gives the necessary particulars concerning his premises (he need not necessarily teach on the school premises), his equipment and the arrangements he proposes to make for teaching. He may also be required to give a short exposition of a medical subject. If the applicant is a fellow of the Royal College of Surgeons of Edinburgh the same procedure is followed by that College. Should the candidate not be a fellow of either College he has to apply to both bodies, who appoint a joint committee, the procedure thereafter being the same. Vacancies are not advertised. Once recognized by the Colleges, a teacher automatically becomes a member of the Board of Management of the School of Medicine. Each teacher pays rent for the premises he uses for teaching purposes, provides his own teaching material and is remunerated out of the fees of students who attend his classes. At times in the past there have been several competing teachers in the same subject, but at the present time there is only one lecturer recognized in each subject. From August, 1941, students have had to attend the Dick Veterinary College in Edinburgh for instruction in physiology.

51. The witnesses who met us on behalf of the extra-mural schools stated categorically that these schools were interested only in the teaching of students and were not interested in medical research. We have already stated our views on the necessity for a combination of research and teaching in medical schools.

(b) Students.

52. The number of students of the extra-mural schools has fluctuated widely since the beginning of the century. During the first fifteen years or so a large number of university students attended courses at the schools either in substitution for or in addition to the corresponding courses in the university schools. At the end of the war of 1914-1918 both the extra-mural and the university medical schools were crowded with men demobilized from the Forces. When this wave of students had passed, the entries to the extra-mural schools declined greatly. By 1926 the entry to St. Mungo's College was less than ten a year, to the Anderson College about thirty a year, and to the School of Medicine, Edinburgh, forty a year. In the period 1931-38 the number increased enormously. In 1936 new entrants to St. Mungo's College numbered a hundred and eight, to the Anderson College seventy-eight and to the School of Medicine in Edinburgh ninety-five. The very inadequate accommodation and equipment of the schools must have

been severely overtaxed to provide an efficient pre-clinical training for such large numbers. The organized teaching clinics in the teaching hospitals were overcrowded and great difficulty was experienced in securing satisfactory provision in pathology and clinical midwifery for the normal number of university students, as well as for the extra-mural groups. This inflation in the entries to the extra-mural schools was the result of a movement in the United States of America to raise the standard of medical education in that country by reducing the number of entrants to the American schools and thereby securing higher standards. The authorities in the United States had to take steps to close this Scottish back-door to the medical profession in the United States. Their measures were just becoming effective in 1939.

53. On average the quality of students in the extra-mural schools does not seem to be as high as in the university schools. A small number of students who fail to keep their places in the latter transfer to the extra-mural schools. In proof of their claim that extra-mural students must have an educational standard equivalent to university matriculation, the representatives of the Anderson College stated that practically all of their present entrants had secured a certificate of fitness from the Joint Entrance Board, but had just failed to find a place in a university school. Most of their entrants had, in fact, been assessed and rejected by the universities. While the rules for the Scottish Triple Qualification indicate a standard of education for admission to the study of Medicine not lower than university matriculation, special concessions appear to be secured more easily from the Triple Qualification Board of Management than from the Joint Entrance Board of the Scottish Universities.

54. We have received evidence that in those classes in which extra-mural students meet university students on equal terms, such as the class of pathology and the clinical classes, the former are almost invariably of lower merit than the latter. In the university department of pathology in the Glasgow Royal Infirmary, the peak of the graph of percentage examination marks for extra-mural students is invariably between 40 and 50, while that of university students is always between 50 and 60. A clinical teacher to whose classes both types of students are admitted in almost equal proportions, assured us that it is most unusual for extra-mural students to secure places in the upper half of the examination results. While the qualifying examinations for the extra-mural students are conducted by the Board of Management of the Triple Qualification and not by the schools, it is common knowledge that university students who have repeatedly been unsuccessful at the university final examination often pass the final Triple Examination at their first attempt. There is no doubt that the less able student finds the Triple Qualifying Examination easier than the university examination.

55. Only a relatively small number of the extra-mural students after qualification secure resident hospital appointments, even in the teaching hospitals of Edinburgh and Glasgow in which they receive their clinical training. For instance, in the five years up to the outbreak of war, the Western Infirmary of Glasgow appointed 250 residents, only two of whom had been trained in the extra-mural schools. In the same period Glasgow Royal Infirmary, which is specially associated with St. Mungo's College and within the precincts of which the College lies, appointed 281 residents of whom only four came from the extra-mural schools. [See also chapter 15, paragraph 3.]

56. The representatives of the extra-mural schools laid great stress on the point that these schools could provide for students who, because they had been educated in other countries, or because they decided fairly late in life to study Medicine, were unable to secure a certificate of fitness from the Universities Joint Entrance Board and therefore were debarred from entry

to one of the Scottish university medical schools. We are not able to attach much importance to this point. Relaxations in educational requirements do not help to maintain a good standard of medical education. The only sound policy is to apply the same standards to students from overseas as are applied to students educated in Great Britain. Further it is seldom difficult for a person of good general education to secure a certificate of fitness from the Scottish Universities Joint Entrance Board under the special rules for persons of mature years, and, as appears from the statistics given in chapter 5, paragraphs 29-31, many more students from overseas parts of the British Commonwealth and Empire were admitted by the university medical schools than by the extra-mural schools.

(c) Accommodation and Equipment.

57. The buildings and equipment of the School of Medicine of Edinburgh and of St. Mungo's College are out-of-date and entirely inadequate. There has been a recent well-designed extension to the Anderson College, but even that provides for only a small school with little room for further expansion.

58. The provision and maintenance of equipment, particularly in the laboratory sciences, has become a very heavy charge on the funds of all medical schools. The funds which each of the extra-mural schools has for the purchase of equipment appears to be solely or largely an annual grant of £100 from the Carnegie Trust. Apparently, the provision of other material for teaching purposes, such as diagrams, models and specimens, is the responsibility of the individual teachers and not of the schools. The endowments and financial resources of the schools are very scanty. They do not receive government grants through any channel and the Scottish Royal Medical Corporations which conduct the qualifying examination for the extra-mural students do not make any contribution towards the expenses of the schools. The teachers pay to the schools a percentage of the fees which they receive, either personally or through the school, from the students enrolled in their classes.

(d) Conclusion.

59. The conclusion to which we have been forced is that although they did good work in time past, these three schools cannot meet the modern requirements of medical training efficiently. They are not able to provide a comprehensive course of training satisfying the conditions which we have set out in chapter 1 of our report. If they continue, they will inevitably do so as schools of a lower standard than the other medical schools of Great Britain. Although, undoubtedly, lack of financial resources has been a great handicap to them, they could not be made the equals of university medical schools by being given increased financial aid. We cannot recommend that they should receive any grants from public funds.

60. The right possessed by these schools to use the same teaching hospitals as the university medical schools for the clinical training of their students has created difficulties for the university medical schools in arranging for the adequate clinical training of their students and will prove an obstacle to the development in Edinburgh and Glasgow of medical teaching centres organized on the lines that we have recommended.

61. The whole conception of an organized medical teaching centre and of a correlated course of training is dependent upon the teaching hospitals of the centre being inter-locked in administration, policy and educational work with a *single* medical school. If that conception is accepted as valid it means that the teaching hospitals in Edinburgh and Glasgow that are associated with the university medical schools of those cities cannot at the same time provide teaching facilities for other independent medical schools.

62. In our opinion the three extra-mural schools in Scotland should cease to train medical students. In the absence of new legislation giving specific authority to close medical schools in certain circumstances, and no such authority exists at the present time, the decision rests with the governing bodies of the schools. Should they continue, grants from public funds should not, in our opinion, be made in respect of either the teaching work of the schools or the provision of hospital facilities for students of the schools.

63. We understand that the University of Glasgow is willing to buy the building of the Anderson College and to use it for medical departments of the university school. We have no doubt that the buildings of St. Mungo's College and of the Edinburgh extra-mural school could be put to other uses; the premises of the former might, for example, be used to provide residential accommodation for house-officers and resident students working at the Glasgow Royal Infirmary.

64. The closing of the extra-mural schools will probably lead to the disappearance of the Scottish Triple Qualification, since over 90 per cent. of the candidates for that qualification are trained in these schools. There would be little loss as a consequence to the recruitment of doctors for service in Scotland, since only a very small proportion of practitioners who qualify by virtue of the Triple Qualification decide to practise in Scotland.

West London Hospital Medical School.

65. The West London Hospital Medical School is the youngest undergraduate medical school in the country, having been opened as recently as October, 1937. It was founded specially for women students, and although it has not any rule against the admission of men, in practice, with an occasional exception, only women have been admitted. Students are given training in the clinical part of the course alone, and the maximum number of students which the school is able to admit is twenty-four a year.

66. The school is not a school of the University of London, but has been recognized by the University for the clinical training of students coming within the purview of the University's Council for External Students. The school is also recognized by the Universities of Oxford and Cambridge and by other licensing bodies. It has made application for admission to the University of London. The war led to the deferment of the application. In October, 1942, the application was formally renewed, but the University has postponed a decision pending its review of the provision in London for the medical education of women.

67. The clinical teaching in medicine and surgery is conducted by teachers engaged largely in consulting practice, and by whole-time registrars. The training in obstetrics is given almost entirely by the staff of the obstetric unit at West Middlesex County Hospital. Gynaecology is taught by the two honorary gynaecologists to the West London Hospital. Enthusiasm on the part of the teaching staff has overcome difficulties arising from the uncertain status of the school and its limited financial resources. Since it is not a school of the University it does not receive grants from the University.

68. During the past few years, the school has made an important contribution to the training of women medical students in London. It may well be necessary to ensure the continuance of that contribution for a limited period, but, in view of the recommendations we make in chapter 5, paragraphs 2 to 13, regarding the adoption of co-education in all medical schools, the future of the school has to be examined in the light of wider considerations than the provision of medical training for women.

69. We have reviewed the position of this school in relation to the question, discussed in chapter 6, of the number, size and distribution of medical schools in London and elsewhere. The conclusion that we have reached is that the West London Hospital Medical School should not continue to train undergraduate students beyond possibly the next four or five years.

70. If the existing university medical schools in Great Britain attain their optimum size, as we have recommended, we think that it is most unlikely that any increase will be justified in the number of medical schools of the University of London. The existing number of such schools is already large. Possibly it is too large from several points of view, for instance from the standpoint of the hospital service of the London area, the total number of medical students trained in the metropolis, and the size of the faculty of Medicine in relation to other faculties of the University.

71. Further, if the West London Hospital Medical School continued permanently as an undergraduate school it would be necessary to enlarge it to an economical size. In consequence, new school buildings would be required and considerably increased facilities for clinical teaching would have to be sought. Before the war the normal bed complement at the West London Hospital was 239 beds. The West London Hospital is not the main hospital of the area and we have been informed that it is very unlikely that it could be expanded on its present site to a size necessary for a parent teaching hospital. In the light of this information it seems to us that an expansion of the medical school to an economical size would make it necessary for the school to seek a new parent teaching hospital and to move to that hospital. Such action would be warranted only if there were clear evidence that the national need for doctors was not being met. We do not think that it is warranted at the present time.

DEANS OF MEDICAL SCHOOLS.

72. It is unnecessary to enlarge upon the important influence which a dean* (that is to say the executive head), who has the personality and ability for wise and inspired leadership, can exercise on the life and progress of a medical school. But, because of the influence which it is in his power to exercise, it is desirable to examine various questions relating to his office.

73. At the university medical schools outside London, with the exception of the Welsh National School of Medicine, the dean is a university officer. He is a member and the chief executive officer of the faculty of Medicine. There is considerable variation between the universities in the period during which a dean holds office. It is usual for the head of a non-clinical department of the school to be selected and to combine the office of dean with the headship of his department. We have been informed that, owing to the demands which the post of dean makes on the time and energies of the holder, clinicians on the staff of the school have not as a rule felt able to accept appointment. Whatever may be the reason, at the present time, the dean of only one of these medical schools is a clinician.

74. The Provost of the Welsh National School of Medicine is appointed by the council of the school on the recommendation of a joint selection committee consisting of representatives of the school council and of the University of Wales. He is the principal academic and administrative officer of the school and holds office for such period and on such terms and conditions as the council of the school determines. He may hold the office of provost concurrently with a professorship in the school.

* The head of the Welsh National School of Medicine is known as the Provost.

75. In London, the faculty of Medicine of the University appoints a dean from among its members. As such he is a university officer. Invariably he will be on the staff of one of the medical schools and he may be the dean of one of these schools; but as a university officer he has not any responsibility in respect of the policy or activities of the individual medical schools. For many years the office of dean of the faculty has been held by a clinician.

76. In addition to the university dean there are, in London, the deans of the medical schools. These deans are not officers of the University, and the University does not take part, directly or indirectly, in their selection and appointment. Each is an officer of his medical school and is subject to the direction of the school committee, albeit if he is a man of strong personality he can exert a wide influence on that committee. Contrary to the practice outside London, the deans of the London schools are often practising clinicians.

77. If a dean is to perform his duties successfully, he must obviously be a person who can win the loyalty and co-operation of the teachers of the school. He should also have a keen and sympathetic interest in students and their problems, and be able to provide them with advice and guidance, not only during their undergraduate training but after they have left the medical school. Experience has proved the value of his having academic interests and some share, even though it may only be small, in the current educational work of the school.

78. It is doubtful whether, in future, the dean should be the head of a large teaching department, pre-clinical or clinical. The duties of both posts are likely to be too great to be undertaken by one person without undue strain. Either he will not have sufficient time for the duties of his office as dean, or he will be hampered by the demands of that office in his leadership of his department.

79. It is also open to question whether too frequent changes in the office of dean are in the best interests of a medical school.

80. The view has been put to us, and we agree with it, that in most, possibly all, medical schools, it will soon become advantageous, if it is not already so, for the office of dean to be a whole-time (or almost whole-time) appointment, entitling the holder to an adequate salary. The amount of this salary should be such that if the dean is a clinician he is freed from the necessity of having to rely, wholly or partly, upon private practice for his living. He should be provided with adequate secretarial assistance. In order that more attention than has been possible hitherto may be given to the individual guidance and advice of students, it may often be desirable for him to be helped by tutors or advisers of studies.

81. With the object of securing harmony of outlook and purpose between the dean of a medical school and his colleagues on the staff of the school, it should be the invariable practice for the teaching staff to be fully consulted in the selection of the person to become dean.

TEACHING ACCOMMODATION AND EQUIPMENT.

82. The work of teaching and research has been seriously hampered in many schools by deficiencies in accommodation and equipment. It is of the greatest importance that these defects should be remedied. We discuss the matter further in Appendix G.

Chapter 3.

FACILITIES FOR THE CLINICAL INSTRUCTION OF UNDERGRADUATE STUDENTS.

1. We turn now to consider the teaching hospitals and the clinics of the health service which should be constituent parts of a medical teaching centre. We discuss the questions that arise under three main headings: (i) administration, (ii) range and variety of facilities for clinical instruction, and (iii) provision of suitable and adequate accommodation and equipment for teaching and research. Matters under the first two heads are dealt with in the present chapter and under the third head in Appendix G. Questions of staffing are the subject of the next chapter.

ADMINISTRATION OF TEACHING HOSPITALS.

2. In every teaching centre there will be a small group of teaching hospitals, one, occasionally more than one, being the parent teaching hospital and the others associated teaching hospitals. An important question to be examined is the relation between the university medical school and these hospitals, and particularly between the school and the parent teaching hospital. All agree that the functions of a teaching hospital are two-fold, one being the provision of facilities for medical education and research, and the other the care of the sick; but different views are held regarding the relative emphasis to be placed on each of these functions. There are some who maintain that the primary function is to conduct research and undergraduate teaching, and that the secondary function is to contribute to the health of the area in which the hospital is situated. Others take the opposite view and consider that the hospital's arrangements for medical education must be subordinated to those for the care and treatment of the sick of the area surrounding the hospital. Yet another group take the intermediate position and support the view that, in the formulation of policy and in the conduct of the affairs of the hospital, equal emphasis must be placed on the treatment of patients and on research and the training of students, these two functions being complementary and mutually reinforcing each other. The light in which this question is regarded determines to a great extent the views held concerning the administration of a teaching hospital and the nature of its relations with the associated medical school. We take the third view, believing that it best serves the interests of both patients and students.

3. The second view, that the arrangements for medical education must take a subordinate place, is the one to which expression has been given in practice in the case of almost every teaching hospital in the country. No doubt this state of affairs is not the result of deliberate decision, but is historical in origin, being a natural outcome of the evolution of medical education in Great Britain. The teaching hospitals are managed by governing bodies that are completely independent of the universities, and on which, outside Scotland, the universities rarely have any representation. As a general rule the universities have little or no voice in the formulation of the policy of these hospitals or in the highly important matter of the selection of the general body of clinical teachers. Despite the harmonious and co-operative relations that normally exist, the universities are often unable to secure the adoption by the hospitals, for financial or other reasons, of proposals and arrangements dictated by the needs of medical education.

4. In London, as has already been mentioned, the medical schools, with two exceptions, are subject to ultimate control by the governing bodies of

their parent hospitals. Each of the London schools, including the two that are separate legal entities, has a measure of indirect representation on the hospital governing body, in so far as the honorary medical and surgical staff, most of whom, though largely engaged in private practice, are clinical teachers of the medical school, have the right to appoint representatives from among their own number. A few of the schools are represented as such on the governing body, and at one school four members of the school committee attend meetings of the hospital governors in an advisory capacity.

5. The relations between the University of London and the various teaching hospitals are of the slightest. The University has the right to appoint a representative on the governing body of only one of the teaching hospitals, and apart from the selection and appointment of university professors and readers (these teachers form a relatively small proportion of the total number of teachers in the schools) the University does not participate in the selection of teachers.

Suggested establishment of "university" hospitals.

6. Under the existing arrangements, both in London and elsewhere, difficulties have arisen, and medical education has suffered as a result. Various proposals have been submitted with the object of avoiding a recurrence of such difficulties in the future. One of these proposals has visualised the conversion of parent teaching hospitals into "university" hospitals such as have been established in some parts of the United States of America and elsewhere, but not so far in Great Britain. In its extreme form the proposal contemplates that the university should assume complete responsibility, financial and otherwise, for the maintenance and management of the hospital. If viewed solely from the standpoint of the organization of medical education this conception has much to commend it. On the other hand there is strong opposition to it in many quarters, largely on the grounds that, although clinical training and research must be continuously associated with the treatment of patients, the latter is a distinct function involving heavy responsibilities which the universities as at present constituted could not undertake.

7. In the light of the expected opposition and difficulties, a modified version of the proposal has been submitted to us. It is that one or two university hospitals of the following type should be established as a beginning:—

(a) The university should be the governing body concerned with the activities of the hospital in relation to medical science, with the general policy ("the clinical strategy") of the hospital, and with the selection and appointment of the medical staff.

(b) The hospital should have a board of management responsible for the finances and day-to-day administration of the hospital.

(c) The clinical work should be organized on the basis of large clinical units balanced as between the various fields in regard to number of beds, accommodation and other facilities. These units should be outside the control of the hospital board of management and under the direction of the university.

(d) Every large clinical field should be represented by a university director, who, whether he held a professorial title or not, would have the prestige of the head of a university department.

8. The supporters of this proposal contemplate that the university would be free to design the clinical pattern of the hospital in accordance with the needs of medical education and research, and irrespective of the hospital services and needs of the surrounding district. In a sense, the university hospital would be apart from the general hospital service of the area. The population

of the district would have its specialist services provided by other hospitals, leaving the university hospital free to make a selection of patients according to the requirements of education and research.

9. We make the following observations on this proposal:—

(i) We are not satisfied that it is in the interests of medical education for a teaching hospital to remain aloof from the hospital services of its area. That it must have the power to select patients is established, but the exercise of this power is not dependent upon the hospital ceasing to be a full partner in the hospital service of the district in which it is situated. Indeed it is desirable that it should form part of that service if only to avert the danger of its educational work suffering because its admission of patients had become too highly selective.

(ii) In our view it would be impracticable and unreasonable to expect a board of management of a teaching hospital to assume financial and legal responsibility for the hospital and to direct the day-to-day administration, if it had no voice in the appointment of staff, the organization and conduct of the clinical work, and the planning of the accommodation.

Alternative measures to establishment of "university" hospitals.

10. As we have stated earlier in our report, it is our belief that a university medical school must be in a position to exercise effective control over all stages of the course of training and to secure that the educational requirements are satisfied in respect of the staffing, accommodation, equipment and arrangements in the various constituent parts of the teaching centre. We are convinced that a medical school can be placed in this position and its parent teaching hospital become a "university" hospital in spirit, by changes less radical than those involved in the proposals examined above. The evidence we have received leads us to think that these less radical changes are likely to be generally acceptable. Our proposals are set out in the paragraphs that follow.

11. A university medical school and its parent teaching hospital should be legally and financially separate. Legal and financial independence is as necessary for the medical school as for the teaching hospital, and far from being a hindrance to co-operation can greatly foster and strengthen collaboration. It is relevant to note in this connexion the following extract from a publication issued in October, 1943, to commemorate the fiftieth anniversary of the opening of the Johns Hopkins University School of Medicine, a school justly famed and extolled both in America and elsewhere:—

"Without the close relationship to the Johns Hopkins Hospital which has existed from the very beginning, and happily still exists, the Johns Hopkins University School of Medicine could never have developed as it has, and indeed might never have been born. Nor, on the other hand, would the Johns Hopkins Hospital have been able to accomplish what it has, if it had not had the benefit of a close alliance with the Johns Hopkins University. Both institutions have profited immeasurably by the relationship, and their union in a common enterprise, medical education and medical research, has forged a bond between them that is perhaps all the stronger because it is not formulated in any written agreement. Indeed, so close is the tie that many persons are still surprised to learn that the University and the Hospital are separate corporations, each with its own board of trustees and its own funds. It is easy to see that such corporate independence might have proved a source of weakness, but in this instance it has been, in the judgment of many informed persons, a source of strength."

12. Since it is solely on account of their association with medical schools that teaching hospitals can be placed in a category of their own, entitling them to special grants from public funds, the educational interests should be in a position to exercise an effective influence on their policy and activities. In order that those directing the affairs of the university medical school may have adequate opportunities for advocating the needs of medical education and influencing hospital policy, the governing body of the school (outside London this will be the university authorities) should have the right to appoint a reasonable proportion of the members of the governing body of the parent teaching hospital. It is desirable, though perhaps not quite so important in most teaching centres, that the school should also be represented on the governing bodies of the other hospitals in the teaching centre. In London the representation of the medical school on the hospital governing body should be supplemented by the appointment of one or two representatives by the University Senate. In the case of every parent teaching hospital, whether it is in London or elsewhere, the governing body should include members of the active teaching staff of the school, such members preferably being nominated by the teachers themselves.

13. In so far as the granting of representation to the university medical schools on these lines may be dependent upon amendments in the instruments of incorporation of the teaching hospitals, we suggest that such amendments should be made by omnibus legislation.

14. Co-operation between the medical school and its teaching hospitals would be further assisted if the governing bodies of the teaching hospitals were represented on the governing body of the medical school as is already the case in some places. Where the medical school is a faculty of a university, the most feasible course would probably be to grant the teaching hospital the right to appoint one or two representatives on the chief executive body of the university. In the case of the other schools the granting of representation should be a simple and straightforward matter.

15. Likewise, an exchange of representatives between the governing bodies of the parent and associated teaching hospitals of the centre is an arrangement to be encouraged as likely to strengthen mutual co-operation.

16. The medical school should be the recipient of public grants in aid of the medical educational work of all the parts of the centre, including those grants in respect of the facilities provided by the teaching hospitals. This proposal is considered more fully in chapter 22.

17. The selection of medical staff for the medical school, the teaching hospitals and health services comprising a teaching centre for undergraduate students should be made through the same advisory machinery. This recommendation is one to which we attach the greatest importance, and we consider it further in chapter 4, paragraphs 40 to 49.

18. If a parent teaching hospital is to function efficiently as an institution for medical education, and is to work in close association with the medical school, certain administrative conditions must be satisfied. The first is that the governing body of the hospital shall acquire an intimate knowledge of the work of the institution and its staff, and shall have effective powers for determining the policy and development of the institution. Such a governing body must be personal to the hospital and should include representatives of the university (and where appropriate of the medical school as well), together with representatives of the teaching staff of the school and hospital. The facilities required for successful teaching will not readily be provided if the management of the hospital is in the hands of a body administering a number of hospitals and having to act on principles applicable

to all, without any personal knowledge of the needs of individual hospitals or of their staffs, or of the detailed requirements of medical education. As at present administered, most local authority hospitals would not satisfy this condition. Compliance would necessitate the appointment by the local authority of a committee of management for the hospital, and the delegation to this committee of a wide measure of authority over the hospital, including power to control the expenditure of the hospital within a total sum fixed by the local authority on estimates submitted by the committee. The committee should have the widest possible discretion in the expenditure of its budget and should not be tied rigidly to detailed allocations determined by the local authority. It is desirable that the local authority's representatives on the governing body of the medical school and on the joint advisory committee for the selection of staff of the teaching centre should be chosen by the local authority from among members of the hospital committee.

19. In a few instances voluntary teaching hospitals have medical superintendents, but in most cases the chief administrative officer is a lay secretary or house governor. Whether or not a voluntary teaching hospital has a medical superintendent as its chief administrative officer, the full members of the medical staff have complete individual responsibility for the clinical management of their patients; and, as a rule, when the governing body of the hospital requires advice on medical matters, the opinion that it seeks is that of the medical staff as a whole, expressed through a medical committee or board composed of active members of the staff. Having regard to their professional status, knowledge and experience and to the needs of medical education, we consider it essential for members of the medical staff to hold such a position in the administration of a teaching hospital.

20. A different position exists as a rule in local authority hospitals. A few local authorities have recently modified the internal administration of their hospitals so as to accord to members of the medical staff a position nearer to that occupied by the staff of voluntary teaching hospitals. In most local authority hospitals, however, the usual practice is still to subordinate the medical staff to the medical superintendent, who is the chief administrative officer, the chief clinician and the only member of the hospital staff to advise the governing body on medical matters. In our opinion, if a local authority hospital (other than special hospitals such as infectious diseases hospitals and tuberculosis institutions) is to become a teaching hospital it will be necessary to restrict the scope of the medical superintendent's duties and responsibilities. He should continue to act as the chief administrative officer, but should cease to be the chief clinician of the hospital and should not have any executive powers in respect of the clinical management of patients, except in so far as any such powers are delegated to him on the advice of the medical staff. Further, responsibility for the advice tendered to the governing body of the hospital on medical matters should be transferred to the medical staff as a whole.

21. We have heard conflicting views on the question of whether in a teaching hospital it is preferable to have a lay or a medical person as the chief administrative officer responsible to the governing body for the day-to-day running of the hospital. Whether this person has medical qualifications or not does not seem to us to matter much. The important point is that he should have the qualities that go to make a good administrator, able to keep in effective touch with all the aspects of the hospital's life that affect its smooth and efficient working. If the administrator also happens to have medical qualifications so much the better; but we do not regard the possession of these qualifications as overriding other considerations.

RANGE AND VARIETY OF FACILITIES FOR CLINICAL INSTRUCTION.

22. Various proposals have been made concerning the best means of securing that each medical school shall have the clinical teaching facilities it needs. Basically, there are two schools of thought on the subject. The first is in favour of each school being provided with a teaching hospital of such a size that it contains all the facilities, except possibly those for teaching on infectious and mental diseases, required for the clinical instruction of undergraduate students in every branch of medicine, these facilities to include a limited number of beds for each speciality which, it is appropriate to accommodate in a teaching hospital. In the main, the adoption of this proposal would lead to a substantial enlargement of existing voluntary teaching hospitals. The second school of thought is of opinion that the hospital facilities required by a medical school should be provided by a closely-knit group of hospitals, voluntary and local authority, general and special, the distribution of the various teaching departments among the hospitals of the group being determined largely by local conditions. Those who hold this view are in favour of the development and better organization of existing associations between the main voluntary teaching hospitals and other hospitals in the vicinity of the medical schools. It should be added that some of those who hold the first-mentioned view, seeing advantages in students spending a period of residence in hospital as medical clerks and surgical dressers, have suggested that senior students might spend such a period in local authority hospitals.

23. The local authorities are strongly in favour of such of their hospitals as are suitable being used fully for teaching purposes, believing in (i) the beneficial effect that such a development would have on the standard of work in the local authority hospitals, and (ii) the contribution which these hospitals can make to medical education. We have considered the first of these reasons earlier in our report (chapter 1, paragraphs 20 and 21). The second reason implies that much clinical experience that is not obtainable, or is only partly obtainable, in existing voluntary teaching hospitals could be obtained in local authority hospitals.

24. It is only during approximately the last fourteen years that local authority hospitals have been developed as an organized service. During this period vast improvements have been made and certain of these hospitals have now attained a high degree of efficiency. Generally, the local authority hospitals have almost a monopoly of the chronic sick, of "mental" and "fever" patients. They treat the majority of maternity, tuberculosis, and orthopaedic patients, and admit many patients suffering from certain conditions only occasionally seen in voluntary hospitals.

25. It was not possible before the war, and it is not possible at the present time, for undergraduate medical students to obtain in the wards and out-patient departments of the voluntary teaching hospitals a sufficient range of clinical experience. Consequently many medical schools before the war had begun to arrange for teaching facilities in neighbouring local authority hospitals, not only in respect of infectious diseases and mental diseases, but as a means of supplementing the facilities of the voluntary teaching hospitals for general clinical instruction. The movement had made considerable progress in some centres, especially in Scotland. Elsewhere, the arrangements were largely experimental and of very limited scope. The experience of both teachers and students, who, during the war, have worked in the general hospitals of local authorities in the Emergency Hospital Scheme, supports the

view that these hospitals contain much of great value and interest for teaching purposes. Broadly speaking, however, they remain an untapped reservoir from the point of view of the training of medical students.

Scope of clinical teaching facilities required.

26. Before examining the question of whether the resources of local authority hospitals could with advantage be utilized to a greater extent than hitherto in the training of undergraduate students, and, if so, how best they could be used, it is desirable to consider the scope of the clinical teaching facilities that medical schools (a) need and (b) possessed before the war.

27. Excluding beds for patients suffering from tuberculosis, acute infectious diseases, and mental diseases, and any high specialized service such as a department for patients coming from a wide area for radio-therapeutic treatment, a medical school admitting approximately 100 students a year to the *clinical* part of the course should have access to between 950 and 1,000 beds for teaching purposes (including facilities for research by the staff), such beds being distributed as follows:—

General medical	...	...	...	...	...	250
General surgical (including orthopaedics)	...	...	...	...	...	250
Maternity (including about 25 beds for antenatal cases)	...	...	...	...	...	100
Gynaecological	...	...	...	...	...	50
Children's	...	...	...	...	...	100
Special departments	...	...	...	...	...	150-200
Beds for special purposes	...	...	...	...	...	50
						950-1000

This estimate does not include the nursery accommodation required in the maternity department. In addition to cots for the healthy babies, there should be at least 10 to 15 cots in a sick nursery or bay.

28. Some of our witnesses have considered that a smaller number of beds would be adequate, but the estimates of requirements submitted by the large majority coincide roughly with the figures that we have given. A sufficient number of general medical and surgical beds is the first essential requirement of a teaching hospital. The number of maternity beds is dictated by the number of confinements that a medical student is required to attend. Assuming that patients remain in the maternity department, on average, for 14 days after their confinement, a maternity hospital or department with only 75 lying-in beds will not deal with enough confinements to enable each medical student to attend in the department the number of deliveries (namely 20) recommended by the General Medical Council. In including in our estimates a department of this size, we have assumed that each student will attend at least five confinements in the patients' own homes. It has also been assumed that the teaching of pupil-midwives will not be conducted in the hospital or department: if it were, a much larger maternity hospital or department would be required. The need for children's beds is discussed in Chapter 12, paragraphs 13 and 14. The number of beds in each of the special departments may vary according to local circumstances, but the total number required is of the order we have stated.

29. We have based the estimate on the admission of 100 students a year to the clinical part of the course because we consider that such a rate of admission will be a reasonable one for most medical schools under future conditions. A medical school should aim to be of a size capable of efficient administration, not so large that personal contact between teachers and students is impossible

to maintain, not so small that it is uneconomic to provide staff, accommodation and equipment on the scale and of the standard required. The economic factor will become of increasing importance if, as our witnesses generally desire and we recommend, all teachers of medical students are paid salaries, and more whole-time appointments are created. Further, it is desirable that a proper balance should be maintained between the number of students in the medical school and the number in other faculties of the university of which the school is a part. All these considerations have to be taken into account in determining the optimum size for any school. Since local circumstances play a large part, there are bound to be variations; but we are satisfied that a reasonable size will be one that provides for an entry of about 100 students a year to the clinical part of the course. Should a school be of a smaller or larger size a proportionate reduction or increase would be necessary in the number of beds required.

30. In addition to access to beds in hospitals a medical school requires access to properly staffed, well-equipped, and well-housed out-patient departments, laboratories and clinics. It should also be connected through its teaching hospitals with rehabilitation and vocational training centres. The nature and extent of these requirements are discussed in later sections of our report.

Clinical teaching facilities available pre-war.

31. In Appendix H are tables showing the number of beds in the different categories which, in 1938, were available to the various medical schools* in the main teaching hospitals. These tables also give an indication of the use that was made of other hospitals for teaching purposes.

32. The following general points disclosed by these tables may be noted:—

(a) Every medical school was using a group of hospitals for teaching purposes. These hospitals were dispersed over a considerable area, and, outside London, even the parent teaching hospital was not always adjacent to the medical school.

(b) In all the parent teaching hospitals the number of general surgical beds (including those for orthopaedic cases) was greater than the number of general medical beds. The needs of undergraduate students would appear to demand an equalization of the relative provision.

(c) On the basis of pre-war entries of students, and on the assumption that most of the patients admitted to the beds were of a type suitable for the instruction of medical students, the number of general medical beds to students at the parent teaching hospitals of two of the medical schools in the English provinces and Wales, at all but one of the teaching centres in Scotland, and at all but three of the parent hospitals of the medical schools of the University of London, was below the figure we consider necessary. Similarly, in relation to students there were fewer general surgical beds (including orthopaedic beds) at two of the teaching centres in Scotland, and seven of the parent hospitals of schools of the University of London. The ratio was satisfactory at the parent teaching hospitals associated with the university medical schools in the English provinces and Wales. If, after the war, certain of the medical schools enlarge their admission of students to the number we recommend, almost all the schools will require access to more general medical and surgical beds than are now available to them in their parent teaching hospitals.

(d) In the main the parent teaching hospitals did not provide sufficient facilities for the adequate instruction of students in the practice of midwifery.

* Excluding the Universities of Oxford and Cambridge which, before the war, did not provide for the clinical part of the training.

(e) Outside London, the medical schools, with two exceptions, used special children's hospitals for the training in children's diseases, all but one of these hospitals being voluntary. Generally, the number of beds was adequate. On the other hand the facilities in London were inadequate and unsatisfactory.

(f) In the main, the bed complement in the parent teaching hospitals for the special subjects was much lower than the provision made in our estimate of requirements.

33. One important fact has to be kept in mind in considering the figures of pre-war bed complements of the teaching hospitals. A substantial proportion, in the view of some, an undue proportion, of the beds were filled with patients who were not the most suitable for the training of undergraduate students. The medical staffs of the teaching hospitals could, no doubt, themselves effect an improvement in this respect; but, even so, it seems inevitable that for many years a somewhat higher proportion of the rarer and more complicated types of case will normally be found in the teaching hospitals than in comparable non-teaching hospitals. On account of this fact, the figures in the tables that we have been considering may present too favourable an impression of the available clinical teaching facilities.

Future arrangements.

34. It seems clear that medical schools will have to continue to depend on groups of hospitals for clinical facilities. Invariably, local authority special hospitals, for example, hospitals for infectious diseases, mental diseases, tuberculosis, will be included in the group of hospitals associated with any school. Whether general hospitals of local authorities are included must be settled in the light of local resources, needs and circumstances; but we believe that, as a rule, the inclusion of one or more of these hospitals will be of advantage in securing a comprehensive range of clinical resources, provided that such hospitals are suitably administered, staffed and equipped, and are full partners in the teaching centre.

35. One objection raised to the dispersal of teaching work over a number of institutions is that unless these institutions are situated close together students attend irregularly and waste much time in travelling. These difficulties exist, but some medical schools, for example the Universities of Edinburgh and Glasgow, have succeeded in organizing training on the basis of teaching hospitals that are several miles apart. Adjustment of time-table and suitable arrangements for transport can reduce the difficulties appreciably. Nevertheless, the ideal arrangement, from the point of view of both teaching staff and students, is to have all the hospital facilities required by a medical school in the immediate vicinity of the school, preferably on the same site. In other words the ideal is a medical school in the midst of a complete teaching hospital centre, which has also on the same or adjacent sites various clinics of the health service.

36. It is not necessary for the various teaching hospitals grouped on the same or adjacent sites to be under the same governing body. Common management of all or most of the hospitals would no doubt produce administrative advantages, but experience of some medical schools abroad, for example, the Columbia University Medical School in New York, shows that given goodwill and co-operation and a close linkage of staff, hospitals and clinics under separate governing bodies, voluntary and public authority, can be grouped physically to form a teaching hospital centre that meets satisfactorily all the requirements of medical education. The factor of prime importance is linkage of staff.

37. In most of the provincial cities in which medical schools are situated schemes to provide the ideal arrangement are under consideration and in one or two cases a beginning has been made. In view of the fundamental importance of medical education to the health service, the authorities responsible for the maintenance and development of the hospital service in all the areas in which medical schools are situated should be placed under an obligation to direct all their schemes for an adequate hospital service in their areas towards the building up of medical teaching centres as compact geographical units. The carrying out of this obligation must obviously have regard to existing hospitals and the future hospital needs of the area. Subject to this limitation it should embrace the replacement of existing accommodation as well as the provision of additional accommodation in any branch of Medicine in which there are deficiencies in the clinical teaching facilities available in close proximity to the medical school.

38. In those places in which damage to existing hospitals may be such as to render extensive rebuilding of hospital accommodation a pressing post-war necessity, substantial progress towards the realization of the ideal arrangement may be possible in a relatively short period. In other places the ideal may have to be a long-term objective.

39. In all cases the interim arrangements should approximate as closely to the ideal as local conditions permit. These arrangements should provide that the hospitals in the teaching centre form a closely-knit group of hospitals of various types, which are complementary to each other for teaching purposes, are few in number and are situated as close to one another and to the medical school as possible. The recognition that each hospital is a full partner in the teaching work of the centre should underlie the staffing plan and the selection of staff.

40. The group of teaching hospitals associated with a medical school must include at least one parent teaching hospital which forms the focus of the arrangements for clinical instruction. It is desirable that this hospital should be attached or as near as possible to the buildings of the medical school. While every hospital in the group will require special accommodation and equipment necessitated by educational and research needs, the scale of this accommodation and equipment will be greater in the parent teaching hospital than in the other hospitals of the group. The admission of patients to the parent teaching hospital should be selective and controlled with a view to securing a good variety of types of disease, including those which provide the most suitable illustrations of physiological and pathological principles to students in the earlier stages of their clinical studies. If it is a local authority hospital, it must be as easy to admit, when necessary for educational reasons, a patient who resides outside the area of the local authority as one who lives in that area. Though often they may be less suitable for elementary clinical instruction, abstruse and technically difficult cases will also have to be admitted (unless they can be treated better at special centres), because, for example, such cases frequently require a long and detailed investigation which can best be carried out in a parent teaching hospital. At the same time it is important that as rapid a turnover of cases as possible should be achieved in a parent teaching hospital. The association of the hospital with a semi-convalescent hospital or hospitals should help to increase the rate of turnover without detriment to the welfare of patients. The administrative arrangements in a parent teaching hospital have already been considered (see paragraphs 12-20 above).

41. Whether a parent teaching hospital is voluntary or is owned by a local authority is not a question of first importance; the vital matter is that it should satisfy the various conditions essential for the furtherance of teaching and

research. In general, the existing voluntary teaching hospitals with their previous experience of educational requirements are suitable to act as parent teaching hospitals, although improvements in their accommodation for teaching and research, and changes in some of their arrangements will be required in the interests of education. There is no fundamental reason why local authority hospitals should not become equally suitable and eligible to be considered as parent teaching hospitals in the event of it becoming necessary to find a new parent hospital for an existing school or of new schools being founded.

42. Apart from the linkage between the governing bodies of the hospitals and the medical school, and the adoption of a common machinery for the selection of medical staff engaged in teaching students, the following measures are involved in our conception of a group of teaching hospitals in a medical teaching centre:—

(a) A member of the staff of any of these hospitals who teaches medical students shall be recognized as a member of the staff of the medical school and be entitled to the privileges and subject to the obligations attaching to the grade of appointment which he holds on that staff.

(b) The teaching work in the various branches of Medicine shall be so distributed among the hospitals of the group as to utilize the clinical resources of the hospitals to the best advantage for educational and research purposes. For example, the later stages of the training in general medicine and surgery might be conducted in hospitals other than the parent teaching hospital. Or again, in some cases it might be desirable for the teaching in, say, obstetrics and gynaecology, in child health or in one or more of the special subjects, to centre on one of these other hospitals, as offering a greater wealth of clinical experience than can be gathered in the parent teaching hospital.

(c) The responsibility of the academic heads of the divisions of medicine, surgery, obstetrics and gynaecology, and pathology, and of the heads of the various teaching departments within these divisions (see chapter 9, paragraph 20) for the general organization and direction of teaching in their respective subjects shall extend to whichever hospitals of the teaching centre are used for the training of students in those subjects. Thereby may the necessary continuity of teaching in the medical school and the various hospitals be secured.

(d) A proportion of the medical staff of all grades will hold appointments at more than one of the hospitals of the group, such appointments not being nominal but involving regular participation in the work of each hospital. For example, some of the staff of the parent teaching hospital might also be on the staff of one of the associated teaching hospitals, or, in the case of some of the special branches, a common staff might be responsible for the work in any such branch in all the hospitals of the group in which it is conducted. We hope that in course of time it will become the normal practice for most members of the staff of a medical school to limit their hospital appointments to the teaching hospitals associated with the school. A desirable exception to this rule, applying particularly to London, would be that senior members in the special departments of the undergraduate schools should be associated with the appropriate post-graduate institutes and hospitals in the special branches of Medicine (see chapter 17, paragraphs 23 to 30).

(e) As a general rule the clinical instruction of students in any of the hospitals of the group will be undertaken by members of the staff of that hospital. The practice whereby a physician on the staff of the parent teaching hospital makes an occasional visit, with his class of students, to

one of the other hospitals for the purpose of conducting a teaching ward round is, on balance, unsatisfactory. Under arrangements that have existed hitherto, in respect of the use for teaching purposes of other hospitals than the parent teaching hospital, such a practice may often have been justified as a means of ensuring continuity of teaching. In the absence of co-ordinating machinery, there has been the likelihood of a divorce of view between the teachers in the medical school and the parent teaching hospital on the one hand and the medical staff of the other hospitals on the other. Our proposals for linking the teaching work of the various hospitals and the medical school should remove the possibility of lack of cohesion in the instruction. To place the instruction in the hands of the staff of the hospital in which the teaching is given is advantageous in that the teacher usually has more knowledge of the patients upon whom he is demonstrating, and there is not any feeling of intrusion between the patients and himself such as may be occasioned by another clinician demonstrating on particular patients.

(f) Although not essential, it would be advantageous, particularly in helping to secure a desired selection of patients for the teaching work of the parent teaching hospital, if the various hospitals of the group conformed to an agreed policy regarding the admission of patients or used a common organization.

RELATION OF A MEDICAL TEACHING CENTRE TO THE HEALTH SERVICE.

43. It will contribute to the successful operation of the national health service if the influence of any medical teaching centre is felt not only throughout the health and hospital services of the hospital "area" in which the centre is situated, but much further afield. Indeed every practicable means should be sought to bring every hospital into association, directly or indirectly, with a teaching centre. We believe that on these matters there is general agreement.

Clinical work.

44. It is desirable to consider what measures of association will be practicable, especially since proposals have been made which imply that consultants and specialists on the staff of teaching hospitals should provide the main links, by being also on the staff of non-teaching hospitals and making regular visits to the latter hospitals. We have noted the following statement in the Government's White Paper on "A National Health Service" (page 25):—"It will often be desirable that the consultant's association should be with more than one major hospital, so as to enable the sharing of a common consultant staff to become an effective link between hospitals. The consultant's function will be normally one of regular and frequent visiting of these hospitals, both for in-patient and for out-patient consultation; also of properly arranged visiting of outlying "general practitioner" hospitals, which need to be linked with the major hospitals; and—for certain consultants as circumstances may require—of visiting Health Centres and clinics, and, in case of need, the patient's home, at the request of the general practitioner." For the linking of various non-teaching hospitals, we believe that the method suggested in this statement is the right one. Further, we strongly support its application as between the parent and associated teaching hospitals constituting a medical teaching centre. We are opposed, however, to its use as a means of linking a parent teaching hospital with non-teaching hospitals, and we believe that it should be used only occasionally in the case of such of the medical staff of an associated teaching hospital as may not be serving also on the parent teaching hospital.

45. If specialists on the staff of teaching hospitals are to fulfil in a proper manner their obligations to care for patients in those hospitals, to teach medical students, and to advance medical knowledge, they will have to spend a considerable amount of time in the teaching centre. In fact it is in the interests of teaching and research, and thereby ultimately of the health service, that they should be encouraged to spend as much time as possible in the medical school and teaching hospitals to which they are attached. We are convinced that if they give as much time as they should to the clinical and educational work of the teaching centre, it will be impracticable for them to undertake regular duties in other hospitals. As we have mentioned earlier, one of the defects of the present system is that most clinical teachers have been able to devote too little time and thought to teaching and research because of other calls on their time and energies. These other demands have been increased in many cases by the dispersal of their clinical work over a number of widely separated hospitals.

46. We realize that until there are sufficient specialists to meet the needs of the health service it may be necessary as an interim measure for specialists on the staff of teaching centres to serve also in non-teaching hospitals.

47. In proposing that the regular clinical and teaching duties of the medical staff of teaching hospitals should, normally, be restricted to these hospitals, we do not contemplate any insulation of these hospitals from the rest of the hospital system. Clearly, the specialists of a teaching centre should be available to give advice when it is desired by the staffs of non-teaching hospitals or other practitioners; and when the condition of the patient so requires, it may be necessary for a visit to be made to wherever the patient is being treated. But we are firmly of the opinion that, as a general rule, the hospital work of the staffs of a teaching centre, including consultations with members of the staffs of other hospitals, should be conducted in the hospitals of the teaching centre. Those requiring the help of the centre should normally come to the centre, instead of the staff of the centre being required to go to outer hospitals.

48. In addition to the staff of a teaching centre being available for consultation and advice in respect of the care and treatment of individual patients, the medical school and teaching hospitals of the centre will, under our proposals, develop a series of educational associations with all the major hospitals in a wide area around. As a result of these associations, this area may aptly be regarded and described as the centre's "zone of influence." In so far as these major hospitals may be linked by means of their specialists with the outlying "general practitioner" hospitals, there will be a measure of contact between the teaching centre and all hospitals in its zone of influence.

49. The associations in question will not be formal but will involve personal contacts between those responsible for the work in the respective institutions. In the first place there will be associations in respect of pre-registration house-appointments. Our proposals are explained in chapter 15. They involve the approval by the various universities having medical faculties of non-teaching hospitals for the purpose of these appointments. The appointments as we view them, will be the final stage of every student's undergraduate training. The staffs of the approved hospitals at which these appointments are held will be called upon to play an important part in completing the training of the future doctors; and it will be essential for close relations to be maintained between them, the deans and the senior clinical teachers of the medical schools. So as to emphasize the part played in the training of students by specialists supervising pre-registration house-officers in non-teaching hospitals, we advocate that such specialists should be affiliated to the staffs of the appropriate medical schools.

50. Other associations will arise from the proposed arrangements for post-graduate education. We recommend in chapter 17 that each of the universities having a medical faculty should assume responsibility for the organization of post-graduate education within its zone of influence. For this purpose we suggest that each should appoint a committee for post-graduate studies on which all the interests concerned are represented. Though organized by the universities, much of the post-graduate work will be done in hospitals that are not parts of medical teaching centres. Most of the refresher courses for general practitioners should be conducted in such hospitals and we are in favour of intending specialists obtaining part of their post-graduate training and experience in these hospitals, and particularly in those approved for pre-registration house-appointments.

51. There is yet another way in which the medical teaching centres can help the hospital service generally and can facilitate the task of securing a better distribution of specialists. They should, in our opinion, make it an established principle that the tenure of an appointment in a non-teaching hospital, far from reacting adversely against a man's appointment to the staff of a teaching hospital, is regarded as a valuable asset.

Pathology.

52. The establishment of a comprehensive health service will necessitate the conversion on to a permanent basis, and probably the extension, of the war-time service for public health bacteriology and of the pathological service of the Emergency Medical Service. It is outside our province to consider the post-war structure of these services except in so far as they are likely to affect the work and responsibilities of medical schools. In this last respect the following points have been established in evidence:—

(i) Many more pathologists will be needed after the war, particularly for the two services that have been mentioned. To provide for the training of an adequate number, expanded facilities will be required in the various medical teaching centres. It is important that most of the post-graduate training should be conducted in these centres. The results would be unfortunate if the two services trained their staff exclusively in their own laboratories and became closed services. Before the war there was a shortage of bacteriologists and the shortage is likely to be more serious after the war. At the present time, including the teachers in the medical schools, there are about 800 pathologists of various kinds. We are informed that at least double this number will probably be needed after the war. Of the additional pathologists, a large proportion will have to be clinical pathologists, capable of staffing "area" and subsidiary laboratories throughout the country.

(ii) The staffs of the pathological departments of the medical teaching centres should not assume direct or indirect responsibility for the routine work of the public health bacteriological service or the general pathological laboratory service. The main laboratories of each of these services for the area or region should, wherever possible, be situated in close proximity to the pathological laboratories of the teaching centre, but they should be independently staffed. In view of their academic responsibilities, the heads of the departments of the teaching centre will render most help to the development and the maintenance of a high standard of work in the services if they fill the role of friendly and helpful colleagues whose advice on pathological problems is given when invited. The administration of a pathological service in a large district will need the services of an experienced pathologist who is able to devote the whole or the greater part of his time to this work. The examination of pathological material, its correlation with

the clinical picture, the prompt despatch of reports, and the investigation of field problems are urgent and responsible activities, and must have first claim on the time and energies of the staff of a service that undertakes them. The staffs of the pathological departments of teaching centres, whether they are heads of departments or are occupying posts of lower grades, could not participate in the day-to-day administration of the normal work of either service without detriment to the performance of their proper duties, in conducting research, teaching and the pathological work of the teaching centre.

(iii) It would probably stimulate a good standard of work in the public health bacteriology and the general pathology laboratory service and would be beneficial to the pathology departments of teaching centres if a regular interchange of staff between the laboratories of the two services and the pathology departments of the teaching centres could be effected; or, should an interchange of this nature prove impossible, if the staffs of the services could have the opportunity from time to time of working for a period in the laboratories of the teaching centres. It would also help if the officers-in-charge of the main laboratories of these services were affiliated to the staffs of neighbouring medical teaching centres.

Participation of medical schools in administration of the health service.

53. We have concentrated so far on the personal associations that should be developed between the various staffs because we believe such associations are of paramount importance in securing the desired co-ordination. We wish now to make a short reference to the relation of the medical schools to the administrative machinery of the national health service. Having regard to the dependence of the health service on the system of medical education, we submit that the medical schools must be regarded as one of the partners in the health service, and accorded an appropriate place in the scheme of administration. If Central Health Service Councils are established for England and Wales and for Scotland, the universities of the respective countries should have representation on these councils, their representatives having the same status and rights as representatives of other interests. We have noted that, in outlining in the White Paper on "A National Health Service", the possible constitution for the Central Council for England and Wales, representation for "medical teaching" is included. Although there is no similar specific reference in the section dealing with the service in Scotland, we presume that, as it is stated that the Central Health Services Council for Scotland is to have "the same kind of constitution", representation of "medical teaching" on the Scottish Council is also intended.

54. The various university medical schools in England and Wales should also be represented on the local health services councils for the areas in which they are situated; and each of the Scottish universities should have representatives on the appropriate Regional Hospital Advisory Council and local medical services committee. We stress the need for adequate representation in each case.

55. For the fulfilment of their educational and research responsibilities, the medical schools have a vital interest in the planning and co-ordination of a comprehensive hospital service in the areas in which they are located. We think it well to repeat that medical education should not be regarded as a mere incidental of the hospital service. While our object in urging that medical schools should be properly represented in the governance of the health service is to ensure that they shall be assisted in making their contribution to that service, we think that the experience gained from existing Joint Hospital Advisory Boards, such as that which has been working in

Manchester for a number of years, lends colour to the belief that the advantages of university representation will not be solely on the side of medical education.

TEACHING ACCOMMODATION AND EQUIPMENT.

56. It is generally true that in important respects the accommodation and equipment provided in teaching hospitals for the purposes of teaching and research have fallen short of the requirements both in standard and in scope. The nature of the requirements is considered in Appendix G.

Chapter 4.

STAFFING.

1. Various questions relating to the teaching and other staff of a medical teaching centre require consideration. As we have mentioned earlier, the general principles which we consider should be fulfilled are: that the teachers shall be suitably qualified, that there shall be enough of them and that they shall have adequate assistance, technical and secretarial, to enable them to devote the requisite amount of time and attention to teaching and research.

TEACHING STAFF IN PRE-CLINICAL DEPARTMENTS.*

2. In the various university medical schools the staffing arrangements in the departments concerned with pre-clinical studies are on the normal university pattern. In the departments of anatomy and physiology most members of the staff hold whole-time salaried appointments carrying superannuation rights. The heads of the departments are whole-time university professors, except at one school, at which the department of anatomy has two part-time professors at its head, and the department of physiology, two whole-time university readers.

3. At the medical schools outside London most of the appointments are made by the university authorities. The exceptions include regius professorships, appointment to which is in the hands of the Crown. In the case of the schools of the University of London, the powers and responsibilities of the University in relation to the staffing of the pre-clinical departments are broadly speaking the same as in relation to the staffing of departments of schools in other faculties than Medicine. The University is concerned in the selection of professors and readers, but not of other grades of teacher. It may, however, as already noted, confer the title of "recognized" teacher on these other teachers.

4. In the junior grades, the tenure of an appointment is generally for a limited period. In the senior grades it is usually to retiring age, subject in some cases to periodical review. The normal retiring age in the London medical schools is 60 years (with a possible extension to 65 years); in the schools in the English provinces and Wales it is 65 years and in the Scottish universities 70 years.

5. Subject to our remarks in paragraphs 55 to 57 below with regard to regius professorships, fundamental changes do not appear to be necessary in respect of the types of appointments in the pre-clinical departments or in the machinery for the selection of teachers for these posts. The main problems in these departments are under-staffing and a lack of recruits of the right calibre, training and outlook. At the present time most departments of anatomy and physiology, together with pharmacology, are understaffed.

* *Note.*—For our views on the arrangements for teaching the pre-medical subjects, see chapter 7.

6. The shortage of recruits of the type required is partly due to the fact that many other branches of Medicine offer better economic prospects. Even the highest posts available in anatomy and physiology have attached to them salaries which, in general, are much lower than the salaries paid to whole-time clinical professors. The man who commits himself to anatomy or physiology as a career and who does not attain professorial rank receives, even after many years of hard and often admirable work, a salary which is quite inadequate for a man of his professional training and status in mid-life, and which compares very unsatisfactorily with the average incomes earned in medical practice.

7. When considering the staffing of the physiology and anatomy departments we must bear in mind certain possible future developments. At the present time the main function of teachers in these departments lies in training medical and dental students. It is possible, in view of the increasing national interest in such matters as nutrition, physical education, agricultural and veterinary education and the focusing of more attention on the maintenance of health, that the future may bring anatomy and physiology into wider contact with the life of the community. It may well be that every member of the community should learn some elementary anatomy and physiology from teachers adequately trained in these subjects. Such possibilities indicate the importance of increasing the present recruitment of junior workers in the subject. If they materialize the number of senior posts for anatomists and physiologists may increase.

8. The view is fairly generally held that, for the better interpretation and application of anatomy, physiology and pharmacology to Medicine as a whole, it is desirable that at least a good proportion of the teachers of these subjects should possess a medical qualification. Further, for the general advancement of the subjects and for an adequate and modern outlook in the teaching of them, it is essential that prospective recruits should be able and anxious to engage in research work and should have sufficient time to do so. These considerations lead us to the conclusion that the solution of the existing recruitment and staffing difficulties lies in (i) improving the salaries paid to the professorial heads of pre-clinical departments, (ii) creating more readerships and senior lectureships at adequate salaries in these departments, and (iii) appointing a sufficient number of junior members to the staffs to permit each one to devote a substantial part of his time to reading and research. These junior appointments should normally be held for limited periods. The salaries should be higher than in the past so that the younger members of the staff are relieved of the necessity of seeking other sources of income and thereby dissipating their energies during an important period of their development.

TEACHING STAFF IN CLINICAL DEPARTMENTS, INCLUDING PATHOLOGY.

9. In the clinical departments, unlike the pre-clinical, fundamental changes are necessary in the plan of staffing. The existing arrangements have the following main features:—

(a) While many members of the junior staff hold whole-time salaried appointments, only a small minority of the senior staff hold such appointments.

(b) Most of the clinical teachers are, of necessity, mainly engaged in private practice. Not infrequently, they hold appointments on the staffs of several hospitals in addition to the teaching hospital and may attend the medical school and teaching hospital for only a few hours a week. As a rule they are not paid salaries by the medical school or teaching hospital,

but may receive a small honorarium or fees for lectures and class teaching. Though their desire may be to have it otherwise, their teaching work must inevitably be an incident in their practice as specialists.

(c) Broadly speaking, apart from the relatively small number of university appointments such as those of professor, reader or senior lecturer, the clinical teachers are selected without reference to the medical school. These teachers first obtain appointment to the staff of the teaching hospital. They are so appointed by the hospital governors, often, except in Scotland, on the recommendation of the medical staff of the hospital. Promotion on the basis of seniority is a frequent practice. As a rule the medical school has to accept the members of the medical staff of the teaching hospital as clinical teachers, whatever may be its view as to their suitability for educational work, since in present circumstances it cannot otherwise obtain access to the clinical facilities it needs for training purposes. In fairness to those concerned it must be stated that the devoted service of the clinical teachers has minimized the defects inherent in the system.

(d) It is not customary to have at the head of each clinical department a teacher who is responsible for the general organization and direction of the teaching and research work of the department, as is the arrangement in a science department, or indeed in any other department, of a university.

10. The changes we consider necessary are:—

(1) The creation of more whole-time appointments in all grades, senior, intermediate and junior.

(2) The adoption of new machinery for the selection of clinical teachers and members of the staffs of teaching hospitals, coupled with arrangements to minimize "in-breeding."

(3) The payment of salaries to clinical teachers in respect of defined duties.

(4) The reorganization of the educational work of the clinical departments on the basis of at least each clinical division having an academic head.

We shall consider the first three changes more fully in the present chapter. The fourth is examined in chapter 9, paragraphs 13 to 21.

More whole-time appointments.

(a) Senior grades.

11. The principle of whole-time senior appointments in the departments dealing with the various branches of pathology is firmly established. Almost all the medical schools have whole-time professorships or readerships in these departments. There should be no exception to this practice.

12. In medicine, surgery, obstetrics and gynaecology, and the other clinical subjects, the practice of appointing whole-time senior teachers has so far been adopted in a limited manner by only a few schools. In the English provinces* and Wales there is a whole-time professor of medicine at the University of Bristol, and there are whole-time professors of medicine and surgery at the Welsh National School of Medicine. In London,* three of the schools, St. Mary's Hospital Medical School, St. Bartholomew's Hospital Medical College and University College Hospital Medical School have whole-time professorships in both medicine and surgery, while two others, London Hospital Medical College and St. Thomas's Hospital Medical School have

* Here we are considering undergraduate departments; but in passing it may be noted that the post-graduate school of the University of Oxford and the British Postgraduate Medical School in London have whole-time professors in clinical subjects.

whole-time professors in medicine only. The holders of all these appointments are debarred from engaging in private practice. At the beginning of 1944, the University of Durham decided to convert its part-time chair of surgery, which became vacant at the end of 1943, into a whole-time professorship, and negotiations, interrupted by the outbreak of war, for the appointment of a whole-time professor of medicine at the University of Manchester are now being reopened.

13. At the other university medical schools outside London there are one or more part-time professors of medicine and surgery, who (except at certain Scottish universities, where they are expected to devote the greater part of their time to the duties of their university chairs) are allowed unrestricted private practice. Several of these schools, however, had plans for substituting whole-time professorships for the existing part-time chairs, and these plans would have been put into operation but for the war.

14. Until recently none of the schools outside London had a whole-time professor in obstetrics and gynaecology; each had a part-time professor. But in 1943 the regius professorship in midwifery at the University of Glasgow was converted from a part-time to a whole-time basis. Two of the London schools, the London School of Medicine for Women and University College Hospital Medical School, have a whole-time chair in the subject, although the chair at the former has been vacant since 1939.

15. It will be noted that the experiment with whole-time clinical professorships has been made principally in the London schools. At these schools the professors are the heads of "professorial units." It is useful and illuminating to look at the origin and history of these units, as described in the following extracts from the memorandum of evidence submitted to us by the University of London:—

"The Unit system was devised in consequence of certain criticisms of the traditional system of clinical teaching in the London Medical Schools. These criticisms found full expression in the evidence given before the "Haldane" Commission on University Education in London, shortly before the last war; and in their final report, issued in 1913, the Commissioners made recommendations which formed the basis upon which Units were ultimately established in several Schools.

Controversy over Clinical Teaching.

Those who were opposed to change described the advantages of the traditional system as follows. The hospitals and the Medical Schools derived mutual benefit from their close association, which would be lost if the Schools moved less in the orbit of the hospitals and more in that of the University. The hospitals obtained the free services of the students as clinical clerks, dressers, etc.; and the best of those who qualified were willing to take posts as house-surgeons or house-physicians at very low salaries before embarking upon private practice. In some cases School laboratories were used for examination of pathological specimens, etc., and the fact that patients were treated under the critical eyes of students meant that diagnosis and treatment reached a standard higher than that in a non-teaching hospital, with a corresponding effect upon the hospital's prestige. On the other side the Medical Schools had available the services of the most distinguished consultants in each branch of medicine to act as teachers at very low salaries, and in some cases no remuneration at all. The system of clinical teaching was flexible and as the size of the bedside classes was small a teacher of distinction could exert a profound influence upon the students who passed through his hands.

The critics on the other hand maintained that there was a fundamental difference between the outlook of the hospitals and that of the University towards medical education, and that the scales were weighted heavily in favour of the former. The hospitals were admirably designed and conducted for the cure of the sick on a routine basis; but their view of education was merely that it should provide, as quickly as was consistent with efficiency, the necessary qualifications to practise and participate in the day-to-day work. The scientific approach to medicine was subordinated to the practical side.

The preliminary subjects were not, it was argued, taught as fundamental sciences, but were merely regarded as a background of facts to be memorised before clinical teaching could start. Teachers in these subjects had neither the salary nor the status which they would have expected as University teachers in other faculties.

With regard to the clinical teaching; it was contended that medicine was the only faculty in which all the instruction was given by part-time teachers who could, under no circumstances, achieve the status of a University Professorship. Moreover, the practically automatic appointment of members of the honorary staffs of hospitals to posts in the Medical Schools assumed that everyone who was distinguished in the practice of medicine was necessarily qualified to teach it. One witness before the Haldane Commission stated that "Clinical teaching in London remains an incident in the life of a busy consultant who comes to his post through promotion on the basis of seniority, and visits his too miscellaneous wards twice weekly in the afternoon."* It was also argued that the scientific study of clinical problems was deficient. "The clinical material is insufficiently classified; there is nothing like a comparatively permanent scientific or clinical staff, without which continuity and thoroughness of study are alike impossible. The house staff is composed of recent graduates serving short terms. The system therefore does not tend to promote scientific study and teaching. It moves distinctly against them. If results are achieved they are fragmentary and entirely a matter of individuals. Nor, even so, does any special consequence attach to them. No certain reward stimulates the young physician to engage in original work. His cue is faithful routine. In consequence his preliminary scientific training goes largely to waste."*

It was, in short, claimed that the Medical Schools were in the nature of "trade schools," and that both the scientific approach and research were deficient.

Continental and American Methods.

In the discussions which followed these criticisms, the Continental or American system came under review. In such systems the University occupies a dominating position, and it generally has attached to it a University hospital, the various departments of which are each under the charge of a University professor with a skilled full-time staff working under him. The professor instructs all the students in a particular subject and gives large-scale demonstrations at daily clinical lectures, accompanied by diagrams, specimens, etc., in contrast to the English system of small classes conducted at the bedside. In Germany such departments under the control of professors are known as "kliniks" and cover all the major subjects. In a large hospital there might be two or three medical and the same number of surgical "kliniks", and attached to each there would be lecture

* Evidence given to the Royal Commission by Mr. Abraham Flexner.

rooms, laboratories, rooms for students, etc. Under this system obviously the scientific method and the classification of material, keeping of records etc., are facilitated.

On the other hand objections were raised that there was a loss of personal contact between the teacher and the student, and in some cases the theoretical aspects tended to obscure the practical ones. The clinical lectures might be attended by so large a number of students that only a small proportion could benefit by close observation of the demonstrations. It was also said that the pure scientist tended to regard the human subjects with which he has to deal as experimental material rather than as individuals. The English system, where the teaching is done by a regular practitioner, inculcates a more humane outlook in the students, and teaches them from the first to regard patients as individuals.

The Haldane Commission.

The Haldane Commission in their final report felt that it would be possible to combine the best features of the Continental and the English systems. They were of opinion that it was essential to appoint in the major subjects University professors and readers who would have the same standing as those holding similar posts in other faculties. Each professor should have adequate staff, research facilities and proper office accommodation; the control of 50-100 clinical beds in the hospital, a post-mortem service, an out-patients' department, and leisure for private research.

They did not think it was necessary that a professor should be prohibited from engaging in a limited amount of private practice. It was recognized that there would inevitably be difficulties in prescribing the extent to which private patients might be taken; but they felt that with good will on both sides a suitable compromise could be made.

At the same time the Commissioners were impressed with the importance of combining the system of giving students free access to the patients in the wards, with the demonstrative method at clinical lectures given by the professors. They accordingly wished to continue the system whereby students act as medical clerks or surgical dressers under the direct supervision of the hospital honorary staff, and in fact proposed to combine the system of the clinical unit with that of the 'firm'.

16. We continue the story. The Haldane Commission recommended that three of the London medical schools and their parent hospitals should be invited to agree to a complete reconstitution of their staff, so that whole-time professors took charge of the three main clinical departments in the same sense as the professor of physiology would do for his department. The financial cost of such a scheme for each school, and the desirability of testing its actual influence both on education and on the care of patients, made the Commission restrict their proposal to this limited application. At least one medical school in London showed readiness to accept all the required changes, but the outbreak of war in 1914 abruptly ended Government interest in the matter.

17. In 1919, on the advice of Sir George Newman, a direct offer was made to the medical schools by the Board of Education in a somewhat different sense. The aim was not the complete reconstitution of any medical school, but the formation of clinical units within any school and teaching hospital in London. Each such unit was to be under the control of a whole-time director, to have adequate beds, assistants and laboratory facilities, and to receive an annual grant. But, as the name suggested, the unit was to be in the nature of a separate entity, to be inserted into the framework of the school and hospital, and not of necessity carrying any such responsibility for general organization of teaching and research throughout each main clinical department as had been envisaged under the scheme of the Haldane Commission.

18. The offer from the Board of Education came advantageously at a time when teaching in the medical schools had been seriously disorganized by war, and when there were clinicians of mature experience likely to be attracted to such posts on their return to civil life after some years of whole-time service with H.M. Forces. Units in one or more of the departments of medicine, surgery and obstetrics were quickly established at several of the London schools, and later at Cardiff. Towards the end of 1919, the subvention through the Board of Education was transferred to the control of the newly established University Grants Committee, and the latter naturally required that the directors of the units in London should be recognized by the University of London. Each director then came under review for his fresh appointment as professor of the University; and subsequently, as the outcome of difficulties arising in some schools where the heads of the units desired freedom for private professional practice, the University resolved that its clinical professors must be debarred from earning non-academic fees. Otherwise the University made no attempt to extend the academic status of its clinical professors within each medical school.

19. The verdict of the University of London on these clinical units is summed up in the following extract from its memorandum of evidence to us:—

“ The system of professorial units in clinical departments was instituted with a view to securing that during their clinical course students should be in contact with the latest advances in scientific research. A recent review of the whole question, which included the interviewing of the heads of all the Units now functioning at the London Schools, has reinforced the opinion that the Units have served and are serving a purpose of the highest quality in providing a scientific background and in raising the standard of teaching in the Schools.

The Units have not contributed to the progress of Medicine by the publication of research to the extent which was originally hoped, but this is partly due to the large amount of time which the Professors must necessarily devote to teaching which is their primary duty.”

20. One of the schools of the university, St. Bartholomew's Hospital Medical College, which has had professorial units in medicine and surgery since 1919, has stated “ The presence of the Units has had the effect of stimulating the non-professorial Units to reach as high a level as possible, both in teaching and research, by emulating the example set, and has formed a good scientific background, indicating the possibilities of research to the students. A school without such Units must lose a great deal.”

21. In comparison with many other countries, Great Britain has been slow to accept the principle that good clinicians are not necessarily good teachers and that medical education of university standard cannot be fully attained unless clinical teachers are specially selected, and at least some of them are able to devote themselves to educational work free from the distractions of having to earn a livelihood in other directions. There is now, however, good evidence of the widespread acknowledgment of the value of, and the need for, more whole-time senior teachers in clinical subjects.

22. Almost every university medical school has informed us that it wishes to have, in addition to other whole-time appointments, at least one whole-time professor in each of the departments of medicine, surgery, and obstetrics and gynaecology.

23. The General Medical Council stated in its memorandum of evidence that it anticipated “ that any reorganization of medical education will involve the appointment of full-time Heads of Departments in Medicine, Surgery, and Obstetrics, with an adequate number of paid assistants ”. The Royal College

of Physicians of London, while considering that the majority of the teachers in the clinical period should still hold part-time appointments, stated that it "attaches importance to the principle of providing an academic career in medicine. It is felt that there are not yet sufficient opportunities, and therefore it is recommended that there should be some increase in the number of whole-time appointments". The Royal College of Surgeons of England expressed the opinion that "The formation of University Clinical Units should be encouraged. The number of University Chairs should be increased . . . Remuneration should be by salary and, in a certain number of appointments, practice for gain, either in the hospital or outside, should not be allowed. The possibility of a purely academic career in clinical medicine will thus be preserved, and the Professor protected from encroachment on his time by claims outside his professorial duties". The Royal College of Physicians of Edinburgh, while believing that the majority of senior posts in teaching hospitals should be part-time and permit of consulting practice outside the hospital, "is strongly in favour of a limited number of clinical teachers devoting themselves entirely to hospital work, and especially to research, and receiving appropriate salaries. Deep and intensive investigation of important hospital problems of disease can only be carried out if the physician is undistracted and uninterrupted by work outside the hospital. Work of this quality must stimulate every member of the hospital staff, and raise the prestige of the hospital and the medical school".

24. Finally, in the memorandum of evidence obtained by the British Hospitals Association from the voluntary teaching hospitals of Great Britain the following statements appeared:—(i) in the section prepared by the Committee of Chairmen of the Teaching Hospitals of London—"Some medical staff appointments should be whole-time and some part-time. No hard and fast rules as to the proportion of each can be laid down but we think that the number of full-time appointments should be increased as they afford more time for research and systematic teaching, although part-time appointments, in order to maintain the balance between academic and practical instruction, should predominate. Junior staff should be entirely whole-time and the intermediate usually whole-time, though in this group it may be necessary for exceptions to be made." (ii) In the section containing the views of the Committee of Chairmen of the Teaching Hospitals of the Provinces—" . . . it is suggested that the heads of departments, who will normally occupy the Chair or Lectureship of their particular subject, should be full-time officers who should be allowed a limited private practice in their own departments".

25. On the ground that only thereby can the best provision be made for the training of medical students we recommend that the staff of every medical school should include a whole-time professor in each of the major subjects. This goal will have to be reached by stages as suitable men and women become available; but progress towards it should be pressed with all possible speed. Among the best of the younger clinicians there is said to be a growing willingness to accept whole-time hospital and teaching appointments.

26. By this recommendation we do not advocate the reproduction in other schools of the professorial clinical units which have been established in some of the London schools, or the continuance in their present form of the existing units in the London schools. For reasons which we explain in chapter 9, we consider that the whole-time professors in clinical subjects should be the academic heads of their respective departments, with a measure of control over the planning of the teaching work of their non-professorial colleagues.

27. In the clinical subjects other than general medicine, general surgery, obstetrics and gynaecology, and pathology, the demands on the senior staff

for undergraduate teaching are not normally such as require whole-time service as teachers, except probably in the departments of child health, social medicine and anaesthetics. In several of these departments, however, it will be desirable, sometimes necessary, if suitably qualified persons are to be secured, that senior members of the staff, though part-time teachers, should be whole-time officers of the teaching centre. Varying with local circumstances, a proportion of these appointments may be professorships, readerships, or similar university appointments.

28. It is not easy to define in a hard and fast manner the qualities that it is desirable for professors, who are the academic heads of clinical departments, to possess; men of very different qualities have their contributions to make in the field of education. All should, however, be stimulating and acceptable teachers and efficient and tactful administrators. If not actively engaged in research at the time of appointment, they should have proved their ability to prosecute and direct research. They should have a broad vision and an interest in the needs of Medicine and should have had a wide experience of medical practice.

29. In the selection of men to be in charge of beds in the divisions of medicine and surgery, every endeavour should be made to maintain a proper balance of interests. For instance, in the department of medicine the staff should comprise men with varied interests in all the special aspects of general medicine, such as cardiac and respiratory diseases, gastro-enterology, neurology and endocrinology. One of the duties of the professor should be to see that such a balance is maintained in the teaching of general medicine.

30. While the holders of the professorships we have been considering should engage in and promote research and must be given time and facilities to this end, their primary function in our view should be the organization, direction and conduct of teaching, that is to say the teaching of medical students, the training of future specialists and, where appropriate, other forms of post-graduate education. It follows that in choosing these professors due weight should be given to candidates' interest in and ability for teaching.

31. Divergent views are held on the question of whether a whole-time professor in a clinical subject should be permitted to see private patients, and if so, on what terms. We understand that there is a similar division of opinion, which has not yet been resolved, among the medical schools in the United States of America. Some of our witnesses have advocated that a professor or any other senior teacher holding a whole-time appointment in a clinical subject should be debarred from undertaking private practice. The University of London has applied this condition to the professorial clinical units that have been established in certain of its medical schools. Considerable variations exist in the views of those who are in favour of whole-time clinical professors being allowed to see private patients; although a point that is common to all is that such private practice as may be done must be strictly limited in amount and must not conflict in any way with the performance of the duties of the professorship. In this group some consider that the professor should be allowed to see a few private patients in the teaching hospital; but should not be permitted to undertake private practice outside the hospital or to benefit financially by receiving fees from private patients, any fees paid by such patients being allocated in some way to the funds of the medical school or of the department concerned. Others would agree to the professor seeing private patients, without fee, outside, as well as in, the teaching hospital. Others again would allow the professor the right to see and treat a limited number of patients in the private block of the teaching

hospital and to retain fees. Yet a fourth group take the view that a "whole-time" professor should be allowed to do private practice anywhere for gain, but should be under a "gentleman's agreement" so to limit this practice that his work as a professor does not suffer.

32. In examining this question we must remember that the object of establishing whole-time clinical professorships is to secure for the teaching centre persons whose primary interest is in teaching and the advancement of knowledge and who are enabled, by receiving salaries on a satisfactory scale, to devote the whole of their time to the work properly associated with their chairs. They are "men who will do for medicine what other men do for physiology and chemistry, and indeed, for every subject which is capable of being scientifically treated".* The salaries which they receive must be such that they have no need or desire to supplement them by outside earnings. It follows that any proposal to allow a whole-time professor the right to engage in private practice in order that he may supplement his professorial salary must be discarded as in conflict with the object of his appointment. Should enough persons of the type required not be willing to accept the available professorships at the salaries offered, the right course would be a revision of salaries.

33. If then the motive of financial gain is set aside, the question whether a whole-time professor should be entitled to see private patients if he so desires, resolves itself into a consideration of what will be in the interests of (i) his work as a professor and (ii) the general public. We think that there may be some occasions when, because of his special knowledge of, or interest in, a particular subject, it may be desirable, for the enlargement of his own experience or for the sake of the patient concerned, that he should be able to see and treat a patient who, for some reason, is not an ordinary patient of one of the hospitals to which the professor is attached. Such occasions are likely to be infrequent and should be so. We are in favour of clinical professors being at liberty to attend patients such as these; but at the same time we consider that, for their own sakes as well as for the sake of the medical school and teaching hospitals, they should be protected from pressure to make such attendances frequent events. We think that generally the most satisfactory form of protection will be secured by allowing the professor the right to attend a limited number of private patients, normally on the premises of the teaching hospital, but to stipulate that he shall not receive any fees from them.

34. It should be emphasized that the vital matter is to appoint persons of the right outlook to the professorships: If this be accomplished, whatever arrangement is made with regard to the professor's contacts with private patients will be of minor importance. The solution of any difficulty will not rest on the creation of rules and regulations designed to surround and enforce a way of life, but on the choice of suitable men to adopt that way of life.

35. We have sought to define our view of the professorships in the clinical field as being strictly comparable with those held in non-clinical subjects by men who are satisfied with the academic life and the advancement of knowledge. Such men are urgently needed to aid the progress of Medicine as a science, and to guide the modern training of medical students. But for several years it will not be possible to find enough men to fill such academic posts in all the schools of Great Britain. The type of mind is unusual, and those with the needed gifts have hitherto seen few chances of such ultimate appointments as would encourage them to choose that way of life. They have taken other roads. The lack will be greater in surgery and in obstetrics than

* Final Report of the Royal Commission on University Education in London, (1913).

in medicine, because competence in the first two subjects demands a long technical experience of the care of patients, and the man who has acquired that skill may then prefer to use it in the practice of his art. None the less, it is essential that the academic standard shall be upheld and the status of university professor reserved for those who conform to it.

36. The major divisions of medicine, surgery and obstetrics and the special clinical departments within them will at once require directing chiefs in each medical school; and if a professorial head cannot be appointed, some other way of completing the organization must be recognized.

37. We suggest that in every such instance the chief appointment be that of director, with some freedom for private practice and with a salary, less than that of a professor but higher than that of the other senior clinical teachers in his subject. His staff of assistants and the laboratory facilities, at any rate in the three main divisions, should be as large as if he were the full professor. Tenure should be for successive periods of either five or seven years, and so be open to termination on the school becoming able to appoint a whole-time professor or if the director became too busily engaged in private practice. A director whose post was terminated in this way should have the right to continue as an ordinary clinical teacher on the staff of the medical school and teaching hospital(s).

(b) Intermediate and junior grades.

38. Every effort should be made to include in all clinical departments a number of whole-time appointments in the intermediate and junior grades, particularly the latter. These appointments are necessary to ensure adequate assistance to the senior staff; to secure that the clinical work of the teaching centre attains a proper standard of service; to provide the basis for an academic career in Medicine and the necessary means of selecting those who show abilities of the kind required for such a career; and, lastly, to train those who seek to become specialists.

39. In order that medical officers returning from H.M. Forces may be catered for and also in order that an adequate supply of specialists may be made available, it will be necessary for the teaching centres to have an abnormally large number of junior and intermediate grade appointments for a number of years after the war.

Selection of Staff.

40. There has been complete agreement among our witnesses on the need (i) for suitable advisory machinery for the selection of the medical staff of the school, hospitals and services comprising a teaching centre, and (ii) for arrangements to secure that posts are filled from the widest possible field of candidates.

41. It is generally agreed, and we concur, that the selection and appointment of persons for university chairs, readerships and similar senior posts in the faculty of Medicine should continue to be made in accordance with the usual practice of the university of which the medical school is a part. In every case this practice involves the selection of candidates by an advisory board which contains members expert in the branch of knowledge to which the appointment relates.

42. There is one point to which we wish to invite the attention of the universities that may be concerned. It is important that the holder of a professorial or similar university appointment in a clinical subject should, automatically, become a member of the medical staff of the appropriate teaching hospital or hospitals by virtue of his university appointment, and

entitled to all the hospital facilities necessary for the proper performance of the duties of his post. With this end in view we suggest that, where this is not already done, arrangements should be made either for representatives of the governing body of the teaching hospital concerned to take part in the selection, or for the approval of the hospital governors to be obtained before the appointment is made.

43. It is in the machinery for selecting members of the staffs of teaching hospitals, other than those members who hold university professorships, readerships, or similar senior posts, that a change is generally advocated by the universities, the General Medical Council, the Royal Medical Colleges, the governing bodies of teaching hospitals and the local authorities. In harmony with the almost unanimous view of our witnesses, we recommend that for every teaching centre there should be set up a *small* joint advisory selection committee, and that the appointment of all members of the medical staffs of the hospitals constituting the centre, other than those holding the university appointments referred to above and those of junior grade up to and including the grade corresponding to that of registrar, should be made on the advice of this committee. The services of the committee should be used for appointments to the staff of the parent teaching hospital in the same way as for posts in associated teaching hospitals. As at the present time, the power of appointment should rest in every case with the governing body of the hospital at which the post will be held.

44. In the teaching centres outside London, each of these advisory selection committees should consist of members nominated by the university* and by the governing bodies of the voluntary and local authority teaching hospitals that are constituent parts of the teaching centre. The total number of members and the number nominated by each body can be determined according to local circumstances. The members nominated by the university should include at least one clinical teacher of the medical school as well as one or more experts in the branch of Medicine in which the appointment is to be held; the latter should not be a member of the staff of the medical school. Some members will no doubt serve on the committee for appointments in all fields; others, including the expert members, will vary according to the nature of the appointment to be filled.

45. We support the view expressed by several witnesses that it would be an advantage to have some lay representation on the committee and for the chairman to be a layman, or alternatively someone who, though medically qualified, is a member of the committee in a non-medical capacity.

46. We have considered the possibilities of (i) a single advisory committee for all the teaching centres associated with the schools of the University of London and (ii) advisory committees for groups of such centres; but we have come to the conclusion that the only practicable arrangement will be to have a separate committee for each centre, such committee consisting of members nominated by the parent teaching hospital and the local authority, the governing body of the medical school (which we assume will be a separate legal entity as recommended in chapter 2, paragraph 29), and of the University of London. Some clinical teachers of the medical school should be included among the members nominated by the school. A proportion of the members should have special knowledge and experience in the field to which the appointment relates. It would probably be an advantage if the expert

* In the case of the University of Durham and the University of Wales, it would seem appropriate that nomination should be in the hands of King's College, Newcastle-upon-Tyne, and the Welsh National School of Medicine respectively.

member or members of any committee were selected by the University from a standing panel drawn up by the University and covering all branches of Medicine.

47. Promotion based solely on seniority within a hospital may have detrimental effects on the work of the hospital in caring for the sick, and, if the hospital is a teaching hospital, on the training of students as well. In general, therefore, all appointments to the teaching staff of a medical school and to the medical staff of its teaching hospitals should be advertised and should be filled from the widest possible field and not limited to local candidates. In the selection, due weight should be given to a candidate's ability to contribute to the educational and research work of the teaching centre.

48. Representatives of local authorities in England and Wales and other witnesses have suggested that it would be beneficial to the hospital service if the joint advisory selection committee of any medical teaching centre were used for the selection of the senior medical staffs of the non-teaching hospitals in the hospital area in which the centre is situated, and also, so far as practicable, of other hospitals outside that area but within the teaching centre's "zone of influence". Through arrangements for pre-registration house-appointments and for refresher and other post-graduate courses, the teaching centre is likely to have contacts with these other hospitals and to have a direct interest in securing that their standard of staffing is satisfactory. We therefore believe that the suggestion has much to commend it. It would no doubt be necessary to modify slightly the constitution of the advisory committee when it dealt with posts at hospitals outside the teaching centre; for example by providing that the governing body of the hospital concerned should have representation on the committee when posts at that hospital were being considered. The advisory committee might submit a list of two or three candidates, from which the hospital governors would make their choice.

49. We are not able to support another suggestion which also aimed at a common selection machinery for teaching and non-teaching hospitals over a wide area and which was submitted to us by some witnesses in Scotland. This suggestion was that a regional body, constituted primarily to advise on the hospital service of a region, should be used for the selection of specialists for the teaching centre, as well as for other hospitals in the region. We consider that for the vigorous growth of the teaching centres, upon which ultimately the successful operation of the health service depends, the selection machinery for any teaching centre must be constituted primarily for that centre by the educational and other interests of the centre, and with due regard to its tradition, policy, and the dual interrelated functions of caring for the sick and of providing medical teaching and research. Any other arrangement would fail in large measure to remedy the admitted defects that exist at the present time.

The principle of paying salaries to clinical teachers.

50. If medical education is to be conducted in future in the manner that is generally desired, and which we have recommended, it will be necessary to pay adequate salaries to the whole-time teachers and also to place most part-time teachers on a salaried basis. Because their teaching duties are slight and infrequent, a very small number of the part-time teachers might be remunerated on the basis of a fee per lecture, clinical class or demonstration; but it is essential that the remuneration of all the other part-time teachers should be by way of salary from the medical school in respect of defined teaching duties within a programme drawn up by the school as regards both time-table and subject-matter. There is a general consensus of opinion among our witnesses in support of this view.

51. Should it become the general practice to pay the medical staffs of hospitals for their clinical services, as is proposed in the Government's White Paper on "A National Health Service," the salary paid to any clinical teacher should, in our opinion, be a combined salary in respect of a joint appointment as teacher and clinician in the teaching centre and should be larger in amount than that paid to a non-teaching clinician of corresponding status.

52. Except in the case of professorial and similar university appointments, the medical school and the other constituent part or parts of the teaching centre concerned should consult together in fixing the salary and the proportion to be contributed by each. It has been suggested that a medical school should also receive contributions from its teaching hospitals in respect of the clinical services rendered by holders of professorial or similar university appointments in clinical subjects. Such an arrangement would be a logical one and there is no reason why it should not be made in those centres that so desire, but on balance we think it preferable that the salaries of those who hold hospital appointments by virtue of their university appointments should be met wholly from the funds of the medical schools.

Tenure of appointments.

53. There are considerable variations in the conditions of tenure of senior clinical appointments in the different medical teaching centres. The development of a national health service may lead to a greater measure of uniformity with regard to such conditions as retiring age and the period during which any appointment may be held without being reviewed. Such a smoothing out of the existing differences would, we think, be beneficial. We see advantages in making all clinical teaching appointments for limited terms of years subject to renewal up to the age fixed for retirement. The application of such a rule to university chairs and readerships would be of benefit but would be contrary to the present practice. If it were so applied, alterations might have to be made in the superannuation scheme for university teachers so as to make possible the payment of a suitable pension to any teacher whose appointment was not continued to the normal retiring age.

54. In any case we consider that, should a whole-time clinical teacher desire at any time to transfer to the part-time staff of the teaching centre, he should receive all possible help in doing so from the authorities of the various parts of the teaching centre.

REGIUS PROFESSORSHIPS.

55. Regius professorships have been created in the Scottish universities and in the Universities of Oxford and Cambridge. Some were founded in the sixteenth and seventeenth centuries. Others date from the eighteenth and early nineteenth centuries. They exist in all faculties and each of these universities, with the exception of the University of St. Andrews, has such chairs in the faculty of Medicine. At the University of Oxford there is a regius professor of medicine, at the University of Cambridge a regius professor of physic. The University of Edinburgh has regius chairs in biology, clinical surgery and forensic medicine. The Universities of Aberdeen and Glasgow have the largest number of these chairs. Both have regius chairs in botany, zoology, anatomy, physiology, medicine, surgery, midwifery and materia medica. In addition Aberdeen has a chair in pathology; while Glasgow has one in chemistry and another in forensic medicine.

56. Appointment to a regius professorship is in the hands of the Crown. In the case of the professorships at the Universities of Oxford and Cambridge, the recommendation is made by the Prime Minister; in the case of chairs at

the Scottish universities by the Secretary of State for Scotland. The Prime Minister and the Secretary of State have complete freedom in deciding whom to recommend.

57. Undoubtedly very great care is taken in the selection of candidates and almost invariably the persons appointed have filled their posts with distinction and great success. Nevertheless, we submit that it is contrary to the accepted principles of academic freedom to retain a procedure which makes possible the appointment to a university of a professor who may not be acceptable to the university and in whose selection the university may have had no voice. We therefore urge that the selection and appointment of candidates for all regius professorships should be transferred to the authorities of the universities concerned.

RANGES OF SALARY AND SUPERANNUATION ARRANGEMENTS FOR DIFFERENT CLASSES OF TEACHER.

Salaries.

58. The following are the main considerations to which we have given attention in examining the question of the salaries which medical schools should be in a position to offer to the various classes of teacher. First, the salaries should be such as will attract to all departments of the medical schools enough persons with the qualifications, experience and outlook essential for fruitful research and the maintenance of a high standard of education. Second, means must be devised for improving recruitment to the departments concerned with the scientific subjects which form the foundation of Medicine. Third, provision made for the younger teachers must be such as to foster their intellectual growth.

59. In principle the first consideration is beyond dispute. If it be accepted that medical education and research are fundamental to national well-being, it follows that everything possible must be done to ensure that the ablest and best qualified persons take part in the work of medical education. It must, however, be realized that in this task the universities, as a result of their existing salary scales, will have to face practical problems of no little difficulty.

60. The causes of the present difficulties in the recruitment of staff to the pre-clinical departments have already been referred to in earlier sections (paragraphs 5 and 6). The general view, with which we agree, is that to meet these difficulties the existing disparity in the salaries paid to teachers in these departments and to teachers in clinical departments must be materially lessened. Otherwise the recruitment of persons of first-class ability to the former departments will become increasingly difficult. A considerable proportion of whole-time professors in pre-clinical subjects receive salaries between £1,000 and £1,200 a year with a few rising to £1,500 a year or slightly more. In contrast, the whole-time professors in the professorial clinical units of the London medical schools are paid salaries of £2,000 a year, and salaries of £2,500 a year are paid to certain clinical professors at the British Postgraduate Medical School and the post-graduate medical departments of the University of Oxford.

61. The general level of salaries received by professors in the departments of pathology is approximately the same as that for professors in the pre-clinical departments.

62. With these difficulties in mind and with the object of securing an adequate supply of teachers in all departments, pre-clinical and clinical, we recommend that a national *range* of salaries should be agreed for each grade of teacher in the medical schools. Such a range would consist of a lower and an upper limit within which the actual salary of every teacher of that grade, no matter to which department he belonged, would be settled according to

his capabilities and academic distinction and the particular responsibilities of his post. The salary limits for any grade should apply equally to the staff of the pre-clinical and the clinical departments. Whether the actual salary of any teacher were a fixed one or were on an incremental scale would be determined by local practice. As between centres in various parts of the country, allowance, when necessary, could be made for differences in the cost of living.

63. It may be helpful if we give an illustration of the effect of this recommendation. We have assumed for the purpose of calculating the financial needs of medical schools that the lower and upper limits between which the salaries of all the whole-time professors in the medical schools should fall might reasonably, *at pre-war values*, be £1,500 and £2,500 a year. Our estimates have been based on an average of £2,000. We expect that a salary on the upper limit would be exceptional. In any particular medical school the actual salaries of all the professors would be within these limits. They might all be at the same rate. On the other hand there might be differences, determined not according to subjects in which the chairs were held, but according to considerations personal to each professor. As a result, at one medical school the professor of medicine or surgery might receive a higher salary than the professor of pathology or physiology, while in another medical school the positions might be reversed.

64. The limits which we have assumed might be adopted for other grades of whole-time teachers are, at pre-war values, as follows:—

<i>Grade of appointment.</i>	<i>Lower Limit.</i>	<i>Upper Limit.</i>
	£	£
Reader (or corresponding appointment) ...	800	1,500
Lecturer	700	1,000
Assistant*	500	700
Demonstrator*	350	500

65. We further recommend that the same system of lower and upper limits should be adopted for the salaries of part-time clinical teachers who are either whole-time or part-time officers of the teaching centre. The limits which, for purposes of calculation, we have adopted for such of these part-time teachers as are whole-time officers of the teaching centre are as follows:—

	<i>Lower Limit.</i>	<i>Upper Limit.</i>
	£	£
Physician or surgeon-in-charge	1,000	2,000
Physician or surgeon		
Assistant physician or surgeon		
Assistant (or corresponding appointment)—		
Non-resident	400	700
Resident	300	600

66. We suggest that the salary of a part-time clinical teacher, who is also only part-time in the clinical service of the teaching centre, should be settled, within the limits set out above, on the basis of whole-time service to the teaching centre, the actual amount to be paid to him then being calculated on a proportional basis according to the amount of time he devotes to the teaching and clinical work of the centre.

67. In those clinical departments which require as house-officers practitioners who have already completed their compulsory pre-registration house-appointments, we have assumed that the salaries of these house-officers, if they hold

* A demonstratorship is an appointment for a year or so while that of assistant is of longer tenure though not established like that of a lecturer.

resident appointments, would be between £150 and £250 a year. The remuneration attaching to the pre-registration house-appointments we have estimated as between £75 and £100 a year, in addition to free board and lodging.

68. The contributions from the medical school and the other parts of a teaching centre towards the salary would be settled in any particular case according to the relative amount of time devoted to medical school and hospital work.

69. Our attention has been directed to the urgent need to improve the financial position of the younger whole-time teachers in the medical schools. The problem, which is not peculiar to the medical schools but affects equally other university departments, is how best to remove the danger of a younger teacher's academic work suffering and his career being prejudiced, because, owing to inadequate financial means, he is overburdened with household worries. Many of these teachers are married men with children and often have to devote an undue amount of time and energy to supplementing their incomes from the medical school and teaching hospital by outside work. The payment of higher salaries would improve the position. In this connection we wish to note with approval a statement by the General Medical Council that it might "well be desirable that for a period of years junior members of the staffs of Teaching Hospitals of the standing of Registrars should receive such remuneration as would make it reasonable to require them to abstain from private practice and to devote their whole time to their Hospital and teaching duties." At the same time we agree with certain of our witnesses that for a complete solution the raising of salaries will not be enough. Other provisions are also needed, such as a system of family allowances (a measure which has already been successfully adopted in several universities), facilities to enable the younger teachers to enjoy a communal university life, and an improved system of travelling scholarships.

70. Younger teachers, particularly those who are married, are often obliged, because their incomes do not permit them to do otherwise, to live on the outskirts of towns. In consequence they have little contact with their seniors or colleagues in the university. It has been suggested that a university has a duty to provide a measure of university life for its younger teachers, and that, in fulfilment thereof, it should acquire suitable property in the neighbourhood of the university buildings and should convert it into quarters which could be let at reasonable rents to younger members of its staff.

71. With regard to travelling scholarships, the importance of giving suitably qualified young men and women opportunities of travelling and working abroad cannot be overstressed, and there is a strong case for enabling the universities to make regular provision for the granting to teachers of periods of leave with additional emoluments for foreign travel and study. Special consideration should be given to those teachers between 25 and 35 years of age; regular, though less frequently recurring periods of study-leave should be the rule for senior teachers, including professors. In the case of a young married man, the value of a travelling scholarship should be sufficient to allow him to go abroad and to study, without anxiety on economic grounds as to how his family is faring in his absence.

Pensions.

72. Above the grades of demonstrator and registrar, all the whole-time appointments, whether whole-time on the staff of the medical school or whole-time in the work of the various parts of the teaching centre, should carry superannuation rights. If possible, pension arrangements should also be made

in respect of those giving part-time service to the teaching centre, provided that the amount of such service is substantial, say half-time or more, and is of reasonable duration.

73. If, as is desirable, a proportion of the medical staff of a teaching centre spend part of their time working in a voluntary hospital and the rest working in a local authority hospital, it will be necessary to consider means whereby such persons can be given pension rights. The London County Council has informed us that at the present time an appointment which is not whole-time in the Council's service is not pensionable by the Council unless the officer concerned is employed for the remainder of his time by another local authority or authorities. Officers in the service of voluntary hospitals are pensionable under a federated superannuation scheme if they are whole-time. But under existing schemes a whole-time officer employed partly in the local authority hospital service and partly in a voluntary hospital service is not pensionable at all. We also understand that present arrangements do not allow the aggregation of the pension rights of a person who, after working for some years in a voluntary hospital, transfers to a local authority hospital, or vice versa. We are not competent to propound solutions to these difficulties but we are convinced that a solution must be found if the co-operation that is desired is to be achieved.

STAFF REQUIRED IN THE VARIOUS DEPARTMENTS OF A TEACHING CENTRE.

Teaching Staff.

74. We do not submit recommendations regarding the size of the staffs of the various departments of a teaching centre because we consider that it would be undesirable to frame a common pattern to which each centre would be expected to conform. Each centre must strive to secure an adequate staff for the proper performance of its duties; but adequacy can be obtained in a number of ways, and variations in the scheme of staffing are to be desired. Each centre must be free to adapt its scheme to local conditions, tradition and policy; it must be able to make experiments and to attempt, if it sees fit, to raise standards in certain of its departments above the level of corresponding departments in other centres. It is not, therefore, with any intention of encouraging a standardization of staffing plans that we set out in Appendix I, some examples of the estimates of staff we have used in calculating the future financial needs of the medical schools. We include these examples solely in the hope that they may assist the authorities of the medical teaching centres to make plans suitable for their local circumstances. Our estimates relate to the staff which we regard as reasonable for the conduct of teaching and research in certain departments of a teaching centre having an entry of approximately 100 new students a year. For reasons explained in chapter 17, paragraph 21, allowance has been made for a sufficient number of junior posts for those practitioners who are preparing to become specialists.

75. Our attention has been drawn, particularly by witnesses connected with the Scottish medical schools, to instances in which training has suffered because the number of students under the charge of an individual teacher for instruction at the bedside has been too large. We therefore think it desirable to state our view that for bedside teaching the number of students allocated to any one teacher should be between six and eight. In Scotland it would follow that any clinic should not have more than twenty-five students attached to it.

Technical Assistants.

76. A sufficient staff of non-medical technical assistants is essential in every medical teaching centre. In many medical schools and teaching hospitals

the scale on which technical assistance is provided is inadequate. The need is greatest in the pre-clinical departments and in the departments of pathology. The disadvantages arising out of the difficulty in recruiting teaching staffs for the former could be lessened in their effect by making full use of skilled technicians as research assistants and in the preparation and conduct of practical classes and demonstrations. In the departments of pathology a large number of investigations can be carried out satisfactorily by trained non-medical laboratory workers who have acquired skill in the use and improvization of technical methods. A general indication of the scale upon which technical assistance should be provided in the various departments, if it is to be sufficient for teaching, research and hospital work, may be obtained from Appendix I.

77. There is keen competition for the services of trained technicians for laboratory work. As a result, universities and similar bodies are experiencing increasing difficulty in recruiting and retaining these members of their staffs in face of the more attractive conditions offered by other employers, particularly industrial concerns. The universities are faced with a serious problem which affects not only their medical departments and which presses for prompt solution.

78. We suggest that the various groups of employers and the bodies representing the technicians should adopt a national scale of salaries and superannuation. Provision could be made for adjustments in the application of the scale to meet varying local conditions. If industrial and similar concerns saw fit to co-operate in such a measure of agreed regulation, it would help to maintain the necessary standard of work in the academic institutions upon which they depend for their scientific workers and from which they frequently recruit trained laboratory assistants; while those looking after the interests of the technicians would be assisted in their efforts to place the occupation on a sounder basis and to systematize and improve the training of those who take it up.

79. University institutions have responsibilities with regard to the recruitment and training of laboratory technicians. They should endeavour to recruit as juniors persons who have had a reasonably good general education, and if candidates deficient in general education but otherwise suitable should be engaged they should give these candidates every encouragement and help to improve their general education. The universities should also afford junior technicians opportunities of obtaining preliminary vocational training in general science in university departments or technical schools. Except, perhaps, in the case of those holding the most senior positions, arrangements should be made, whenever possible, to interchange technical assistants between the different departments and laboratories. In itself beneficial, such a widening of their practical experience would enable these assistants to qualify for admission to their professional examinations and so increase their chances of promotion.

80. The provision for technical assistants on their staffs of such amenities as common rooms and meals at reasonably low prices is also a matter which requires the early attention of most university institutions.

Secretarial Assistance.

81. Every teaching department of any size should have attached to it an adequate number of secretary-typists. The custom of providing university teachers with secretarial help is spreading. It is a sensible and business-like provision, productive of economy in time and money. We have made allowance for such secretarial assistance in our estimates of the financial needs of schools.

Nursing Staff of a Teaching Hospital.

82. Except to a very limited extent (for example, in the practical training of students in obstetrics or in a course of demonstrations in nursing technique) members of the nursing staff may not have any specific teaching duties, but they are part of the teaching team of the hospital; and the training of medical students may be materially assisted by the degree of good-will and co-operation forthcoming from the nursing staff. It is important that this fact should be appreciated by all concerned.

83. It is generally accepted that a teaching hospital has to employ a larger nursing staff than a non-teaching hospital of comparable size. The reasons are connected directly and indirectly with teaching and research conducted within its walls. While recognizing this fact and considering that it should be mentioned, we came to the view that we could not usefully attempt to frame comparative estimates of the number of nurses required in teaching and non-teaching hospitals.

Chapter 5.

MEDICAL STUDENTS.

OPPORTUNITIES TO TAKE MEDICAL TRAINING.

1. We believe that prudence and good sense dictate that the promise of developing into a good doctor shall be the over-riding factor in the selection of students and that unsuitability for a medical career shall be the sole barrier to admission to a medical school. To-day, to a limited extent, there are barriers other than lack of aptitude. These barriers stand in the way of women on account of sex, and of students of both sexes who lack the financial resources to meet the costs of medical training. There are also restrictions on the admission of students from overseas. Each of these groups will be considered in turn.

Women students.

2. For many years, co-education has been the normal practice in all the medical schools in Great Britain outside London. We agree with the views of the Medical Women's Federation that women students are admitted to these schools in reasonable numbers, that the arrangements for the training of men and women together are taken as a matter of course and that they work smoothly up to the time the students qualify for admission to the Medical Register. That there has been, and still is, a lack of opportunity for women practitioners trained in these schools to obtain post-graduate training and experience is undeniable. We refer to this deficiency again in paragraph 12 below.

3. Of the medical schools of the University of London, nine admit men students only. These schools are those of Charing Cross Hospital, Guy's Hospital, London Hospital, Middlesex Hospital, St. Bartholomew's Hospital, St. George's Hospital, St. Mary's Hospital, St. Thomas's Hospital, and Westminster Hospital. During the war of 1914-1918 five of them (Charing Cross, London, St. George's, St. Mary's, and Westminster) admitted women students. All but St. Mary's ceased to do so soon after the end of the war, and St. Mary's followed suit some years later. Of the few London schools that admit women students, one, the London School of Medicine for Women, admits women only.

4. The following figures show (i) the ratio of the number of women students to the total number of undergraduate students attending full-time the medical schools in London, in the English provinces and Wales, and in

Scotland in the academic year 1938-39 and (ii) the ratio of the war-time admission quotas for women to the total admission quotas:—

Number of full-time undergraduate medical students in training in Academic Year 1938-39.

	Total number of students.	Women students.	
		No.	Percentage of total (approx.).
London—Schools of University	5,064	551	} 11·5
West London Hospital Medical School ...	38	38	
Universities in English provinces and Wales *	3,587*	708	19·7
Scotland—Universities	2,903	567	19·5
Extra-mural schools	1,375	66	4·8
	12,967	1,930	14·9

* See footnote † on page 47.

Admission quotas for Academic Year 1942-43.

	Total of admission quotas.	Quotas for women students.	
		No.	Percentage of total (approx.).
London—Schools of University*	732	142	19·4
Universities in English provinces and Wales	833	179	21·5
Scotland—Universities	567	126	} 21·8
Extra-mural schools	118	23	
	2,250	470	20·9

* The West London Hospital Medical School (like the other clinical schools in London) does not have a quota under the scheme since it does not provide courses in the pre-clinical subjects.

5. Of the 589 women students at the London schools in 1938-39, 357 were at the London School of Medicine for Women. If the proportion of women students to total number of students had been approximately the same in the London schools as in the universities in the English provinces and Wales or in the Scottish universities, approximately 450 more women would have been in training in London.

6. The quota figures for 1942-43 are not directly comparable with figures for the total number of students in training in 1938-39 since, as explained in chapter 2, paragraph 12, a considerable number of students take their pre-clinical studies at the universities of Oxford or Cambridge and go to London and other schools for their clinical studies. As a result, the proportion of women (i) to the total number of students taking the clinical part of the course, and (ii) to the total number of students in training at any given time in both the pre-clinical and clinical parts, is lower in the case of the London schools and higher in the case of the schools in the English provinces and Wales than the percentages calculated on the admission quota, which relates merely to admission to the pre-clinical part of the course.

7. A further point has to be noted with regard to the admission quotas. The medical schools may at their discretion exceed their quota for women students to the extent by which their quota for men is not filled. As a result, in 1942-43, the entry of women students exceeded the quota figures by 14 in the case of medical schools in England and Wales (including London) and by 39 in the case of the schools in Scotland.

8. In the interests of the public and of the medical profession we believe that co-education should become the normal practice in every medical school. In this belief, and regarding the question as an important matter of public policy, we recommend for Government decision that the payment to any medical school of Exchequer grants in aid of medical education should be conditional upon the school being co-educational and admitting a reasonable proportion of women students. The proportion of women may well vary from school to school and from time to time, according to the quality of the students of both sexes applying for admission and to the public need for doctors. Further, the schools at present admitting either men or women only may have to be allowed an interim period of varying length to adjust their arrangements on a co-educational basis. We propose that it should be left to the University Grants Committee, as the central body responsible for the distribution of Exchequer grants in aid of medical education, to decide on questions relating to compliance with this condition, including the reasonableness at any given time of the proportion of men and women students in any school. In the case of the schools of the University of London the Committee should act in consultation with the authorities of the University.

9. It is important that the number of women students in any school should be a reasonable proportion of the whole, say about one-fifth; otherwise the women will not form a sufficiently numerous body to ensure proper status and position. The grudging admission of a few women is unsatisfactory. The group must be large enough to feel itself to be an important but integral section of the whole, whose members are trained on a basis of complete equality with their male colleagues and given access to all the usual facilities, including staff appointments. There must be no sense of inferiority or of privilege.

10. We wish to make special reference to one school which will be peculiarly affected by the adoption of our recommendation. This school is the London School of Medicine for Women which, under our proposal, will cease to be a school for women only and will become co-educational. In its memorandum of evidence the school expressed its willingness to make the change, believing that it is desirable that men and women should enjoy equal rights of admission to all medical schools and equal post-graduate opportunities. The school was established in 1874 as the only practicable means of providing facilities for women students. It was founded in faith by men and women who believed in the contribution that women could make to Medicine. It was, and still is, the only educational institution concerned primarily with the interests of women medical students and women doctors; and its influence has contributed in large measure to the position that women doctors now occupy in this country. The faith of its founders has been fully justified and the success which has attended its pioneering work augurs well for its work under new conditions in the future. It is deserving of all possible help in the process of readjustment.

11. In March, 1944, the University of London communicated to us a report by a special committee which the Senate of the University had appointed "to report on the question of providing further facilities for the medical education of women in London, and on the procedure to be adopted for the provision of such additional facilities." The chairman of this committee

was Sir Henry Dale, President of the Royal Society. In its report the committee expressed the opinion "that at this stage the University should make clear its permanent policy . . ." The policy which the committee recommended the University to adopt and declare "as the one most appropriate to its own principles" was "the opening of all the London Medical Schools to men and women on terms of equal opportunity." The committee stated that from the evidence that it had received it had reason to believe that such a policy would command at least a large measure of agreement if the University decided to adopt it as its own permanent aim. The University Senate has adopted the committee's recommendation and has appointed a committee to confer with the medical schools teaching undergraduate students with a view to finding the best way to give effect to the University's policy.

12. Naturally we warmly welcome the decision which the University has reached. We do not, however, consider that it is necessary to modify the proposal which we have made in paragraph 8 above. We believe that that proposal will, if adopted, assist the University to implement its policy within a reasonable period of time.

13. Without adequate opportunities for obtaining hospital appointments after qualification, medical women cannot qualify themselves properly for general practice, much less can they train for advanced medical work or specialist practice. Such opportunities are slowly extending and women have already shown that they are capable of filling senior medical posts successfully. Although it is very difficult to obtain conclusive evidence, since the ability to fill a position is often a matter of opinion, it seems clear that women doctors are not yet receiving a fair share of post-graduate appointments owing to discrimination against them on the ground of sex. Such discrimination is unjust to women and, in so far as it may result in the best qualified applicant not securing appointment, is contrary to the public interest. Every possible step should be taken to secure that all hospital appointments are filled by open competition, and that the sex of the applicant is not a bar to appointment.

Students in need of financial assistance.

14. At the universities in Scotland the proportion of medical students who receive financial assistance, in the form of scholarships, grants or loans from public or charitable funds, to enable them to meet the cost of their training, does not differ materially from the proportion of students in other faculties, Arts, Science, Divinity, who receive such assistance. The proportion in the faculty of Medicine may be slightly smaller, but the difference does not appear to have much significance. In England and Wales on the other hand, there is a marked difference between the proportion of medical students receiving financial assistance and the proportion of assisted students in, say, the faculties of Arts and Science. We are not able to give the actual proportions since in some cases the medical schools were not fully informed of grants received by students from such bodies as charitable trusts; but it seems clear that before the war the proportion of university students in the faculties of Arts and Science who received financial assistance (excluding those in receipt of Board of Education grants for intending teachers) was twice or three times as large as the proportion of medical students. The allocation, to meet war-time needs, of state bursaries for students in Science makes comparison for the war years valueless. The comparative figures for one of the English universities and for one of the Scottish universities for the academic year 1938-39 are set out below as an example of the different position in the two countries.

Proportion of students in various faculties who received awards to assist them undertake their training.

Session 1938-39.

	Faculties of Arts, Laws and Divinity.			Faculties of Science and Engineering.			Faculty of Medicine (excluding Dentistry).		
	Total No. of students.	Students receiving assistance.		Total No. of students.	Students receiving assistance.		Total No. of students.	Students receiving assistance.	
		No.	Per- centage of total.		No.	Per- centage of total.		No.	Per- centage of total.
An English University*	742	187	25.0	388	125	32.0	539	59	11.0
A Scottish University	2,245	1,217	54.2	757	357	47.2	1,086	473	43.5

* Excluding Board of Education grants for intending teachers.

15. There were noteworthy differences in the assessment by witnesses from the two countries of the degree to which lack of means prevented students from adopting a medical career. The general view of those familiar with conditions in Scotland was that, although the arrangements for granting financial assistance to students were, as in England, in need of improvement, the faculty of Medicine was drawing students from all classes of the community and that, given adequate ability, lack of means was not a bar to becoming a medical student. The few exceptions were in cases in which the family income was so small that the children went out to work instead of going to a university because the parents were unable or unwilling to forgo the small contribution which the children were able to make towards meeting household expenses. These young people were debarred from any form of university education and not from a medical training alone.

16. On the other hand the evidence received from witnesses concerned with England and Wales leaves little doubt that, while a boy or girl with the necessary aptitude need not be hindered by poverty from entry to a medical school, in fact, the medical schools in England and Wales are not recruiting from as wide a field, embracing all sections of the community, as other faculties of the universities. It is not the fault of the medical schools. The main causes seem to be misconceptions in the minds of many parents regarding the amount of assistance that can be obtained, and a lack of encouragement in many schools to pupils, particularly those of the greatest intellectual ability, to consider Medicine as a career. A student reading for a university degree in Arts or Science takes a shorter course of training than a medical student and can begin to earn his living sooner. We have been informed by those in a position to judge that, because of the higher fees, the heavier burden of maintenance owing to the longer course of training, and the likelihood that, at the end of the training, more money will have to be found to establish the student in practice, there is a strong tendency for parents with small incomes not to give any thought to the profession of Medicine as a possible career for their children. All too frequently it is omitted from consideration without enquiry as to sources from which assistance could be obtained towards meeting the cost. From several causes, of which the present system of competitive scholarships in the Arts and Sciences is certainly one, this tendency has often been uncontested by the school teachers, particularly in the case of the abler pupils.

17. How is the position to be corrected to make sure that Medicine gets a fair share of the ablest boys and girls from all classes, and that a student of adequate ability and character is not deterred from entering on a medical course of training by lack of financial means? The first essential, and this statement applies especially to England and Wales, is to bring home to boys and girls while they are still at school, and also to their parents and their school teachers, that there is no profession that offers a wider range of interests than Medicine, and that boys and girls of ability need not be deterred from entering the profession because their families have not much money.

18. The second need is to ensure that the amount of assistance granted to any student is enough to free him from cramping financial stringency during his training, to enable him to buy proper meals, and to play his part in student activities. In the past there have been cases, in Scotland as well as in England and Wales, of students in receipt of financial assistance just managing, but with some hardship, to continue to the end of their course. Relief from tuition fees is only part of the problem. Maintenance during training is the major part of the burden, particularly in the case of a medical student, in view of the long period that must elapse before he can become self-supporting. Whenever necessary, the assistance granted should extend over the whole period of training. Medical students suffer in this respect, under present arrangements because awards by most authorities, and this is true also of state scholarships, are made for three or, at most, four years. As a result, a medical student, relying on these awards is often faced with difficulties in the later years of his training.

19. In this connection we think it is relevant to draw attention to the war-time scheme of state bursaries in science, and engineering cadetships, the aim of which has been to secure a rapid expansion in the number of men and women with certain scientific qualifications. The awards have been made without regard to parents' financial circumstances and have covered the whole of the fees and the payment of a maintenance allowance equivalent to the full cost of residence at a university or university college.* Compared with these awards, the amount of the financial assistance granted to most students before the war was on a much more modest scale.

20. It is also time to end the existing confusion in the arrangements for scholarships and grants. This problem, which does not affect medical students alone, was referred to in the report of the Committee (the Norwood Committee) of the Secondary School Examinations Council, appointed by the President of the Board of Education in 1941 to consider Curriculum and Examinations in Secondary Schools. The evidence that we have received from the standpoint of medical education has disclosed similar criticisms to those listed by the Norwood Committee. There is a great and undue variation in the generosity of local authorities in different parts of the country, and opportunity to take a medical training may depend upon the area in which the aspirant happened to be born. In the administration of such resources as local authorities possess for the assistance of students, there is much

* The amounts of the maintenance allowances were as follows :—

(i) State bursaries in science (1943) :—

- (a) for students living at home: £90 if attending a college in the London area ; £75 if attending a provincial college ;
- (b) for students living in hostel or lodgings: at Oxford or Cambridge, £150—£175 ; at colleges in London area, £160 ; at universities or colleges elsewhere, £140.

(ii) Engineering cadetships (1944) :—

- (a) for cadets living at home: £100 if attending a college in the London area ; £85 if attending a college elsewhere ;
- (b) for cadets living in hostels or lodgings: £185 a year in London or £165 a year elsewhere.

variation in good sense. Some make inadequate grants to a large number of ill-selected students instead of giving grants of sufficient size to meet the needs of fewer students of proved ability. Some adopt a policy of loans, which accumulate to become a heavy burden on a young man or woman at the start of his or her career. The more generous authorities sometimes work too strictly by automatic rules and formulae, and, as a result, money in excess of what is needed or deserved is given in some cases, while special cases are not adequately considered. There are instances of unwillingness to modify general rules or to investigate particular and exceptional circumstances. A curious example of this rigidity of administrative method, to which our attention has been drawn, was the case of a boy educated at a public school whose parents came to financial grief. It proved to be impossible to obtain any assistance for him from local authority or public sources because his father had paid for the boy's secondary education and had not sent him to a rate-provided or assisted secondary school.

21. A particularly bad feature of the present arrangements is "the multiplicity of sources of financial aid and the weary round which some students make of the scholarship and grant giving bodies and the various sources of benevolence . . . in order by a collection from various sources to provide a sum large enough for their needs." * These various sources, as was noted by the Norwood Committee, comprise university scholarships, awards by local education authorities, state scholarships, private scholarship funds, school-leaving exhibitions. A further defect is the not uncommon practice for each body to investigate independently.

22. It is outside our scope to make specific proposals which would minimize the disadvantages arising from such a multiplicity of channels of assistance; but we wish to put forward a strong plea that the machinery for awarding assistance from public funds should be simplified; and further, that private organizations and charitable trusts, in investigating applications for assistance, should keep in close touch with authorities granting assistance from public sources. In advocating that these organizations and trusts should co-operate with the public authorities instead of working independently, we do not suggest that they should limit their freedom to help persons who, for some reason or another, may be ineligible for awards from other sources. On the contrary, we consider that one of the most valuable functions of private benevolence is to aid deserving students who cannot obtain help in other ways.

23. We record with approval two suggestions received in evidence. They concern the procedure followed in the award of financial assistance to medical students, other than by means of scholarships carrying an automatic right to a place in a medical school. The first is that provisional acceptance by a medical school should precede the making of any award; the second is that awards should not be made solely on a candidate's examination results. With regard to the last point some witnesses expressed the view that acceptance of a candidate by a medical school should be regarded by the bodies awarding financial assistance as sufficient evidence of his suitability.

24. A scheme of family allowances, by which an allowance is paid so long as a child or young person attends an approved educational institution whole-time, would possibly be the most promising, perhaps the only, means of saving able children of poor parents from having to abandon hopes of a university education in Medicine or some other branch of study because of pressure to contribute to the family resources.

25. In addition to the forms of assistance we have considered above, it is desirable that the medical schools should have funds at their disposal for

* From some notes submitted by Dr. W. R. Halliday, Principal of King's College, London

three purposes. The first is for the assistance of students, who, in the course of their academic career are confronted with the prospect of their training being abruptly ended on account, for example, of the death or financial failure of a parent. The second is the encouragement of medical students of outstanding ability to interrupt their medical course so that they may devote themselves to an extra year's study of anatomy or physiology and possibly obtain a science degree; the benefit to the students and to the medical services would be immense. The third is the encouragement of graduates in other faculties to study Medicine.

26. With regard to the last of these objects, there is no better background to a medical training than a university course of study in some other faculty, and it would benefit the medical profession and the medical schools if the number of such graduates entering the medical schools could be substantially increased. Apart from students from the Universities of Oxford and Cambridge, the number of graduates who subsequently become medical students is small and many of the graduates of Oxford and Cambridge who go on to other schools for their clinical studies are not the class of graduate we have particularly in mind, because usually they have obtained their B.A. degree after studying subjects such as anatomy and physiology, which form part of the medical curriculum. We are thinking of the man who has been studying the classics, history, languages, or pure science, and who, having come with distinction to the end of his university studies in one of these subjects, decides that he wishes to become a doctor. Nowadays such a man can rarely act on this decision, lacking the means to keep himself during his medical training. The amount of any award made to him would have to take account of the fact that the age at which he will begin earning a living will normally be three or four years older than that of the average medical student. Scholarships of the annual value of £200 to £250, in addition to free tuition, would probably be required. The expenditure of, say, £50,000 a year on such scholarships might be expected to yield a big return in the quality of doctors recruited for the national health service.

27. Generally the medical schools have some funds at their disposal that can be used for all or some of the three purposes we have mentioned; but these funds are quite inadequate.

28. We are aware that in some instances systems of loans to students have worked well; but we are not enthusiastic about loans as a normal method of aiding students. There is always a serious danger that a student at the end of his training will labour under an unduly heavy burden of debt: Even apparently small annual loans can amount, cumulatively, to a considerable sum by the time a student leaves his medical school.

Students from overseas.

29. Of the full-time students* attending university medical schools (other than the Universities of Oxford and Cambridge) in the academic year 1938-39, 612, or approximately 5.5 per cent., came from homes outside the United Kingdom but within the British Commonwealth and Empire, and 279, or approximately 2.5 per cent., came from foreign countries. The Universities of Oxford and Cambridge have been excluded because figures comparable with those for other medical schools were not available; but the proportion of medical students from overseas parts of the British Commonwealth and Empire and from foreign countries appears to have been much the same at these universities as in the other university medical schools.

* The total includes a few students who were not undergraduate students, but were reading for a higher qualification.

30. At the non-university medical schools, the distribution of students according to country of origin was markedly different. The Anderson College of Medicine, Glasgow, was not able to supply us with details for all its students, but submitted, as reflecting the general position, an analysis of the 53 full-time medical students who were in the *first* year of their training in 1938-39. This analysis showed that of the students, 3, or 5.6 per cent., came from homes outside the United Kingdom but within the British Commonwealth and Empire and 17, or 32 per cent., from foreign countries. At St. Mungo's College, Glasgow, out of 488 students, 15, or 3 per cent., were from overseas parts of the British Commonwealth and Empire and 283, or 58 per cent., from foreign countries; of the latter all but 5 were from the United States of America. The position was similar at the School of Medicine of the Royal Colleges, Edinburgh. Out of 524 regular medical students preparing for a registrable qualification, 84, or 16 per cent., were from places within the British Commonwealth and Empire but outside the United Kingdom, and 243, or 46 per cent., from foreign countries, 219 being from the United States of America. The West London Hospital Medical School only had 1 and 2 students respectively from parts of the British Commonwealth and Empire outside the United Kingdom and from foreign countries.

31. From these figures it appears (i) that the university medical schools in the year before the war were training between five and six times as many undergraduate students from the British Commonwealth and Empire outside the United Kingdom as the non-university schools; and (ii) that the latter schools were training about twice as many foreign students (almost all from the United States of America) as the university schools.

32. The primary obligation of the medical schools in Great Britain must be to students born here, but in so far as the fulfilment of this obligation allows, the schools, as in the past, will welcome suitably qualified students from abroad, and particularly from various parts of the British Commonwealth and Empire. We submit that the standards for the admission of such students should be exactly the same as those applied to students whose homes are in Great Britain.

33. In making this point, we are not overlooking the responsibilities of the educational institutions of this country to aid, by all possible means, educational developments in the colonial dependencies. It seems to us that, in the generality of cases, it is preferable in the interests of the students and of these dependencies that, up to the time of qualification as medical practitioners, colonial students should be educated in their own lands. Future policy should lie in the direction of endeavouring to make the standard of medical education in the colonies as good as possible, of encouraging colonial students to complete their undergraduate training in their own country, and of making good provision in this country for suitable colonial practitioners to obtain the post-graduate training and experience they desire. Apart from providing adequately for post-graduate training and experience, the universities of this country can, in our view, make their most valuable contribution to the development of medical schools in the colonies by encouraging members of their staffs, of all grades, but perhaps especially those in the intermediate grades, to take appointments for a term of years in colonial medical schools. The prospects of promotion and superannuation rights at home of anyone taking up such an appointment should be fully safeguarded. They might well be improved because, while the services of these teachers would be invaluable to the colonial schools, the experience which the teachers would gain would be of great benefit to them personally in the enlargement of their own knowledge and experience, and would increase their value to their own medical schools on their return. A further

advantage, extending beyond the sphere of Medicine, would be that these teachers, on their return home, would be able to play a part in the work of leading the people of the home country to a better knowledge of the people of the colonies. In the early years the movement of teachers would normally be one way, from this country to the colonies; but it is reasonable to hope that in years to come there would gradually develop an interchange of teachers between the medical schools of this country and those in the colonies.

MACHINERY FOR THE SELECTION OF STUDENTS.

34. In recent years much attention has been given in this and other countries to the problem of how to assess aptitude. Some of us have had the advantage of seeing, and of discussing with those responsible, the machinery devised for the selection of candidates to be trained for commissioned rank in the army. We feel that the information which is being gathered deserves careful examination by the medical schools, especially with regard to the extent to which special aptitude tests can usefully be applied. The selection of students is such an important duty and heavy responsibility that it demands and should receive a great deal of time and thought from the authorities and officers of the medical schools, both in the planning and working of the arrangements.

35. The evidence we have received discloses a large measure of agreement on the following principles:—

(a) Before he begins his medical training a student must have received a good general education at least up to the recognized standard of entry to a university. His education should have been broad and general. There is overwhelming evidence that, under existing conditions, the minds of many students are being blunted by undue specialization at too early an age. To propose that the minimum educational standard for the selection of students to a learned profession should be that of entry to an ordinary degree course of a university is not to ask for a high standard; some might consider that it is not high enough. The vast majority of medical students satisfy this condition; but in 1938-39 there was still a small proportion of students who had not passed or qualified for exemption from the matriculation examination of the university of which their medical school was a part.

(b) There is more or less general agreement among the medical schools that selection should not be based solely on examination results. Success in an entrance examination does not necessarily indicate that a candidate lacks the other qualities which go to make up a good doctor, and some persons well qualified to judge assert that the proportion of academically successful students who possess these other qualities is larger than that of the academically unsuccessful. At the same time it is certain that the other qualities are not always possessed by those who do best at examinations. The British Medical Association, in its evidence, attributed "some of the inefficiency which undoubtedly exists in the profession to-day" to the methods of selection used by the medical schools failing to exclude from the profession a number of men and women who, though able to pass examinations, have not the requisite aptitude, character or staying power for a medical career.

(c) As a general rule every prospective student should be interviewed before acceptance, and great weight should be attached to the conclusions formed from such an interview and to confidential reports on his previous career from the applicant's schoolmasters and others. Since it is desirable that students from overseas should have been promised a vacancy

before they leave their own country, and an interview by persons connected with the school will normally be impossible until the students arrive in this country, arrangements should be made for such students to be accepted only on the recommendation of the government of their native country.

Before the war it was the usual, though not the invariable, practice for applicants to be interviewed before acceptance. Some schools relied upon an interview by a single individual, usually the dean or vice-dean of the school. Others preferred a small, carefully selected committee. Although inclined ourselves to favour the task being entrusted to a small committee, we consider that there is need for experiments in the nature of, and methods used at, such interviews. The development of closer collaboration between headmasters and the deans of the medical schools is also to be desired; only thereby can reports from headmasters be truly assessed and the maximum help extracted from them.

(d) The machinery for the original selection of students must be supplemented by adequate arrangements to weed out students who prove unsuitable. The aim should be to secure that the elimination of the unsuitable is done as early in their training as possible, the weeding out being completed for the most part by the end of the first year. From the standpoint of both school and students the number of failures among students in the third and later years of their training should be very small.

HEALTH, RECREATION AND HOUSING OF STUDENTS.

Health of Students.

36. We hold the view that universities have responsibilities in respect of the health of their students and that for the fulfilment of these responsibilities each should provide a properly organized students' health service. The need for such provision will exist even after the proposed national health service has been developed. A university students' health service is on a similar footing to, say, the school medical service and the industrial medical service, and might well be considered as the natural complement of the school medical service. It is generally accepted that local education authorities should have expert medical guidance on matters affecting the health and welfare of the schoolchild and that industrial arrangements need similar help with regard to the welfare of workers in factories. We believe that university authorities, in relation to the welfare of their students, are equally in need of advice from medical officers whose duty it is to keep under close observation all matters likely to affect the health of the students, collectively and individually.

37. As is the case with the other two services mentioned, the medical officers of a students' health service in a university would have excellent opportunities of practising social and preventive medicine. Students at a university, like children in schools or workers in a factory, form a group in respect of whom it is convenient and beneficial to make special arrangements for the practice of preventive medicine by employing doctors who are interested and experienced in the particular problems of members of the group and the conditions under which they are working and living. The prevention of disease and the promotion of health would be the objectives of a students' health service in a university. In addition to advising the authorities of the university, the officers of the service would examine students from time to time with a view to the early detection of disorders. Their advice to students would not be limited to questions of physical fitness; on occasion they would deal with the psychological problems such as arise for some students under the strain of intensive study and examinations. Medical treatment would be outside the province of the service. Where such treatment

was necessary it would be the duty of the officers of the service to encourage and assist students to obtain it in the proper quarter. In this respect, the proposed national health service will improve the position of university students. At the present time they are not covered by the National Health Insurance Scheme. Under the proposed comprehensive service they will be entitled, like every other member of the community, to look to the organization provided by that service for such medical treatment as they need.

38. In the past it has been argued that it is not a function of a university to concern itself with the health of its students. This view was expressed on occasion during the years between the two wars when the subject of physical education for university students was receiving attention. It is not the prevailing view among university authorities to-day. At a number of universities a beginning has been made with a students' health service, although in some cases the war has restricted development or led to a temporary suspension. At others, schemes are ready to be put into operation but their introduction has been deferred on account of the war.

39. A students' health service would be of benefit to all classes of university students and would be one of the means of inspiring the community to a sensible interest in the promotion of health. The service is essential for medical students, since, during their training, they must inevitably be exposed to a greater risk of contracting disease. Further, the service would have a special educational value for them, as providing a practical demonstration of medical practitioners in the role of health advisers. Such a demonstration related to the student's own health and problems is likely to make a more lasting impression than much exhortation. One of the most effective means of educating medical students in preventive medicine is to make them healthily interested in keeping their own minds and bodies fit and strong.

40. In view of the extra risk of sickness to which they are subject, we consider that it should be compulsory for all medical students to have a medical examination on beginning their training and subsequently at such times as may be practicable and desirable. The cost of these examinations should not be an extra charge on the students.

41. Outside London, it is to be hoped that the medical students of each of the universities would be catered for by a students' health service dealing with all the students of the university. In London it will no doubt be necessary for each of the medical schools to organize its own service. In every case, the service should have a director, whole- or part-time as local circumstances require, and an adequate number of assistants. A proportion, perhaps in time an increasing proportion, of these assistants might well be suitably qualified general practitioners in the locality. Wherever feasible, the service might be under the general direction of the head of the department of social medicine.

42. In addition to providing expert supervision and advice, the universities, or in the case of London, the various medical schools, could do much to protect and improve the health of medical students by providing nourishing meals at prices within the students' economic capacity. Before the war there were instances of students suffering in health through undernourishment, often, though not always, because they could not afford the cost of good meals.

Recreational Facilities.

43. Outside London, medical students attending university medical schools are eligible to participate in the social and athletic activities of the student body of the university. Judging from the particulars submitted to us the available students' unions and athletic grounds are reasonably adequate.

Before the war some of the universities had made arrangements for those students who so wished to receive organized physical training under qualified instructors.

44. The London medical schools arrange their own social and athletic activities and their students do not take part to any great extent in university activities. With one exception, each of the schools has its own athletic ground. Generally, as is almost unavoidable in London, these grounds are situated at some considerable distance from the medical schools. Each of the schools, again with one exception, has athletic facilities, such as fives courts, squash courts, and tennis courts in the grounds of the medical school and parent hospital. About half have gymnasia, but, as before the war, so now, there is little in the way of organized physical training. One school has a covered swimming bath and the students of several other schools are allowed on certain days of the week to use the swimming bath in the Nurses' Home of the teaching hospital of the school.

45. It is unnecessary for us to labour the point that adequate facilities should exist for students to take proper exercise. The practical problem is how to cater for all types and temperaments, and particularly for the men and women who are not interested in ordinary team games. Countryside activities such as walking, cycling and climbing sometimes provide a solution and we believe that experience has shown that provision near to the medical school of fives courts, courts for squash racquets and tennis courts, and, above all, of facilities for swimming, results in a considerable increase in the proportion of students who engage in some form of athletic activity.

Housing of Students.

46. Excluding the Universities of Oxford and Cambridge, where only a very few students are living at home, the proportion of the medical students of the university medical schools who in the year immediately before the war were living at home was approximately 58 per cent. The proportion who were living in lodgings was about 34 per cent. and the remaining 8 per cent. had accommodation in halls of residence, with a few exceptions in halls maintained by the universities and medical schools.*

47. There were some interesting differences in the proportions for the different university medical schools.* The schools having the highest proportion of students living at home were the University of Glasgow and most of the universities in the English provinces and Wales. The proportion at the Universities of Glasgow, Durham and Manchester was over 80 per cent. At the Universities of Birmingham, Leeds and Liverpool the proportion was over 70 per cent. At the remaining medical schools in the provinces and Wales it was in the neighbourhood of 60 per cent. The proportions at the Scottish universities, other than Glasgow, were in the neighbourhood of 40 per cent. The London medical schools came between these two groups, the proportions ranging from nearly 43 per cent. at St. Mary's Hospital Medical School to nearly 64 per cent. at Westminster Hospital Medical School.

48. At the Scottish extra-mural schools, the proportion of students who were living at home was below the average for the university medical schools, as would be expected in view of the proportion of the students of these schools who came from overseas.

49. If the matter is viewed from the aspect of those living in halls of residence and in lodgings, it is found that the relative provision of halls of

* It should be noted that in many universities the proportion of medical students living respectively at home, in halls of residence, and in private lodgings, differs from the corresponding proportion for students of all faculties, including Medicine.

residence varied considerably. In the case of some university medical schools about 20 per cent. of the medical students resided in halls of residence. At the other end of the scale there were schools where less than 3 per cent. were so accommodated. In the main the halls of residence used by medical students outside London admitted students of all faculties, while those in which London students lived were for medical students only. The extent to which students live at home, combined with the provision of halls of residence, determines the proportion living in lodgings. This proportion in the case of medical students ranged from just over 12 per cent. at the Universities of Glasgow and Manchester to about 61 per cent. at Aberdeen; the proportions at most of the universities in the English provinces being slightly above or below 20 per cent. and at most of the London medical schools between 40 and 55 per cent.*

50. Residential college life, such as is enjoyed by students at Oxford and Cambridge, is of inestimable value to a student, especially a medical student whose usefulness in his future career will depend in large measure on his ability to understand and to deal sensibly with his fellow human beings. The residential accommodation which the other universities have been able to provide for their students is still scanty. The universities generally are anxious to extend their residential accommodation for students; but they need considerable financial assistance to enable them to do so. Clearly the provision of halls of residence for university students will have to wait until other more urgent post-war claims on building resources have been met, but we should like to emphasize our view that residential college life for university students, and specially for medical students, is not a luxury. Students' residences are an essential part of a university's equipment, providing the channel through which the essence of a university education is obtained. Owing to conditions prevailing after the war, the objective for some time to come may have to be to provide enough accommodation to make it possible for every university student to live for *part* of his undergraduate career in a hall of residence. The most convenient time for medical students would probably be early in the pre-clinical period of training. As opportunities occur steps should be taken to encourage members of the teaching staff to live in the vicinity of the students' residences. The need for halls of residence is, of course, quite distinct from the need for medical students to spend periods of residence in the teaching hospitals as part of their training.

51. To be of the greatest benefit a hall of residence should cater for students of all faculties. From the point of view of medical students in London, all-faculty halls are of special value, since for the most part these students are segregated in one-faculty schools, and under existing conditions have few contacts with other groups of students. Help is needed by universities to meet the capital cost and maintenance expenses. Experience has shown that the cost to the student must not exceed that of ordinary lodgings and that on this basis halls of residence are usually not self-supporting. Subsidies made to such halls can be used as an effective and unobtrusive means of helping, and also of keeping fit, students who lack adequate financial resources.

52. Until enough halls of residence are available, many students will continue to live in private lodgings. Before the war over 3,000 medical students a year were living in lodgings; the total number of university students so resident was over 16,500. The problem is a big one and we

* It should be noted that in many universities the proportion of medical students living respectively at home, in halls of residence, and in private lodgings, differs from the corresponding proportion for students of all faculties, including Medicine.

fear that it has not always received the attention it should. "The desire for economy and the exigent mind of youth often lead the student to occupy rooms which are worse than modest, usually badly ventilated, perhaps unclean, . . ."* This statement applies only to a section of the student population living in lodgings, but the number of students involved was appreciable and medical students were among their number. It is useless to provide a students' health service and to leave students to live in unhealthy conditions. We therefore consider that the universities (in London either the University or the medical schools as may be most convenient) should assume responsibility for the approval and regular inspection of lodgings and that all undergraduate medical students, other than those living at home or in halls of residence, should be required to live in lodgings on the approved list.

Chapter 6.

NUMBER AND DISTRIBUTION OF MEDICAL TEACHING CENTRES FOR UNDERGRADUATE STUDENTS.

1. A variety of complex problems has to be faced in the consideration of the number and distribution of medical teaching centres that should be provided in future for the training of undergraduate students. The task of unravelling these problems and arriving at definite conclusions is made more difficult by the fact that the examination of some of the relevant questions cannot be pursued much outside the realm of indeterminate speculation on "possibilities".

2. Three main criticisms have been made with regard to the pre-war distribution of medical schools and students. First, that the number of medical students trained in Scotland, and particularly in Edinburgh and Glasgow, was too high. Second, that there was too great a concentration of schools and students in London, and particularly in the central part of London. Third, that there were not complete undergraduate medical schools in certain large areas of the country, notably East Anglia and Devon and Cornwall. Before any conclusions can be reached concerning the action that it might be desirable and practicable to take after the war to meet these criticisms, it is necessary to look at the possible demand for and supply of medical practitioners in the future.

3. The total number of practitioners whose names are on the Medical Register has increased from 45,000 in 1921 to nearly 72,000 at the beginning of 1944. The average annual number of additions, restorations and removals (mainly on evidence of death) from the Medical Register (i) during the 20 years from 1920 to the end of 1939 (that is to say during the two decades up to the outbreak of war); (ii) during the three years 1940-1942 inclusive; (iii) for the 20 years 1923 to 1942 inclusive, were as follows:—

Average for	Added by registration.						No. restored	No. removed	Net increase
	England	Scotland	Ireland	Colonial†	Foreign†	Total			
1920-39 ...	918	534	265	230	21	1,968	62	1,077	953
1940-42 ...	1,391	633	327	132	594	3,077	20	1,075	2,022
1923-1942 ...	1,039	553	266	198	108	2,164	50	1,062	1,152

* Professor R. C. McLean, in an article on University Health Services and Health Insurance, *Universities Review*, May, 1937.

† See Appendix J.

The number of admissions to the Foreign List during the years 1941 and 1942 was abnormal on account of the temporary admission of doctors with foreign qualifications under the Temporary Registration Orders of 1941, in order that they might undertake practice in institutions or under other adequate supervision. Further, the number of admissions to the English part of the Register in 1942 was inflated owing to the fact that, in that year, to meet war-time needs, many licensing bodies accelerated the admission of candidates to qualifying examinations by three to six months.

4. Many of the practitioners whose names are on the Medical Register are permanently resident abroad and others are regular members of the Services of the Crown and not available for civilian practice. These practitioners together must number over 20,000, because, according to information supplied by the Central Medical War Committee, in respect of the beginning of 1944, the total number of practitioners normally resident in Great Britain, including those temporarily serving with H.M. Forces at home or overseas, but excluding those practising as dentists, was 50,566. The corresponding figure for Northern Ireland was 1,375. Of those normally resident in Great Britain, 45,413, or 63 per cent. of the total number of practitioners whose names were on the Medical Register at the beginning of 1944, were in active practice. On the basis of a total population in Great Britain of 46,467,000, the ratio of practitioners in active practice to total population was roughly one practitioner to 1,000 of the population. Owing to the effect of war-time conditions, it is not possible to make an exact calculation of the ratio of general practitioners to the population, but as a very rough guide the ratio in normal conditions might have been one general practitioner to nearly 2,000 of the population.

5. There is a *prima facie* case that improvements in the health service implied in the Government's plans may necessitate, for their full accomplishment, a larger number of doctors in practice in Great Britain. It is very doubtful, however, whether at the present stage a final verdict can be reached or a useful estimate can be made. There is no doubt that more specialists will be needed. With regard to general practitioners, who form by far the largest group of doctors, the British Medical Association stated in its memorandum "Lack of time for good work has for long been the complaint of the general practitioner. More general practitioners will be needed if they are to give a full unhurried service to all patients, to undertake some of the work at present done by public health and school medical officers, to make more regular routine medical examinations, and to pay due attention to the maintenance of health as well as the treatment of disease. More will also be needed to ensure that every practitioner may attend post-graduate courses at intervals or spend a period in a clinical assistantship if he so desires, and that he may take reasonable holidays". The number of general practitioners required will clearly depend upon the form of the future medical service and the type of work that general practitioners perform. If, for example, the organization of general practice should, in the future, take the form of group practice from health centres, to which trained nurses are also attached and at which adequate clerical assistance is available, the resultant economy in the time of individual practitioners may be such as to affect considerably the number of patients with whom each can properly deal and consequently the total number of practitioners required.

6. Assuming that further increases in the supply of medical practitioners will be necessary, will the additional supply be obtained, within a reasonable period, without an increase in the number of medical students admitted to the medical schools? Here again we do not think that a definite answer can be given at the present time. Some of our witnesses have been of the opinion that not only will an increase be necessary in the number of students

admitted to the existing schools, but new medical schools will have to be established. We consider that a cautious policy on this question is the wiser course at the present time, particularly with regard to the establishment of new medical schools.

7. We are much indebted to the Government Actuary for helping us with illustrative estimates regarding the number of doctors in civilian practice in Great Britain in the future. A copy of his memorandum is appended [Appendix A.]. The main assumptions that have been made in arriving at the estimates are:—(i) that the proportion of qualified doctors who come from Ireland and other places abroad to practise in Great Britain and the proportion of British trained doctors who take up practice abroad or enter permanent appointments in the Services will remain approximately at the pre-war levels; (ii) that the proportion of medical students who fail to qualify for admission to the Medical Register will be about $12\frac{1}{2}$ per cent; and (iii) that there may be a greater tendency in future for doctors to retire from active practice at an earlier age than has hitherto been the case. On these assumptions, there is a good prospect that within the next 10 years the total number of doctors in civilian practice in Great Britain will increase by several thousands apart from any increase in the entry of students to the medical schools.

8. An increase can be made in the total entry of students to the existing medical schools without detriment to the standard of training. Some of these schools are below the size that is likely to be the most economical under future conditions and in our opinion the first objective for the medical schools and others concerned should be to enlarge the entry of students to these schools. The schools in question should regard themselves as under an obligation to admit more students as soon as they can, but before they can fulfil this obligation they will have to be provided with the means to obtain the requisite teachers, and to increase their accommodation and equipment. If, within the next few years, the total entry of students is enlarged to 2,500 or 2,600 a year—and such an entry should not be beyond the capacity of the existing schools—the supply of doctors in civilian practice in Great Britain may reasonably be expected to have grown to at least 50,000 by 1953 and 55,000 by 1958 (increases of approximately 5,000 and 10,000 respectively).

EXISTING MEDICAL SCHOOLS, OTHER THAN OXFORD AND CAMBRIDGE.

9. A survey of the conditions governing the size of the existing schools outside London has led us to the conclusions set out in the following paragraphs. In general these conclusions are in harmony with the views of the authorities of the schools concerned.

Scotland.

10. In Scotland, undergraduate medical education is conducted in Aberdeen, Edinburgh, Glasgow, St. Andrews and Dundee. In Aberdeen the arrangements are entirely in the hands of the University. In Edinburgh, the university medical school has an extra-mural school alongside it, both schools sharing the same hospital facilities to some extent. The position is similar in Glasgow where, in addition to the university school, there are two extra-mural schools. The arrangements in St. Andrews and Dundee are under the control of the University of St. Andrews. Pre-medical and pre-clinical courses are given in both places, but the clinical courses are held only in Dundee.

11. The view is generally held that the number of medical students trained in Scotland, and in particular in Edinburgh and Glasgow, has tended to be too large. Although for some years the national need for doctors may render

undesirable any reduction in the entries of students, we consider that, except in the case of the University of St. Andrews, a decrease in the entries should be adopted as a long-term policy. In an earlier section of our report we have recommended the discontinuance of undergraduate training by the extra-mural schools. If this recommendation is implemented, the Universities of Edinburgh and Glasgow may, for a time, have to admit rather more students than has been their practice hitherto. By degrees they should be able to reduce the entries to the level which they consider will ensure efficient teaching arrangements.

12. The average annual entries to the *clinical* part of the course in the years 1937 to 1939 inclusive and the approximate entries which, we suggest, should be made the ultimate objectives by the university medical schools are as follows:—

University.	Average annual entry to <i>clinical</i> part of the course 1937-39.	Annual entry to <i>clinical</i> part of the course to be ultimate post-war objective.
Aberdeen	90	75
Edinburgh	203	180
Glasgow	195	180
St. Andrews	55	75
	543	510

English provinces and Wales.

13. Provided that the necessary additions can be made to the teaching staff and to accommodation and equipment, additions which are likely to be on a considerable scale and to be expensive, all the *existing* medical schools in the English provinces and Wales could be expanded without detriment to the standard of the training they provide. Omitting the Universities of Oxford and Cambridge, which are the subject of special consideration later, the average pre-war entry to the clinical part of the course and the entry which we consider should be the objective of these schools after the war are as follows:—

University.	Average annual entry to <i>clinical</i> part of the course 1937-39.	Annual entry to <i>clinical</i> part of the course to be aimed at after the war.
Birmingham	56	100
Bristol	33	80-100
D u r h a m (King's College, Newcastle)	50	100
Leeds	77	100
Liverpool	74	100
Manchester	75	100
Sheffield	26	80-100
University of Wales (Cardiff University College and Welsh National School of Medicine) ...	48	80-100
	439	740-800

London.

14. There are certain facts which require careful examination in considering the number, size and geographical distribution of the medical schools in London in the future. First, the distribution of the medical schools and their parent hospitals in the London area was unsatisfactory even for pre-war conditions. The position is summed up in the following extract from the memorandum submitted by the London County Council:—"The geographical distribution of the existing London medical schools is unsatisfactory from the points of view of either providing the best service for the patients of the administrative county or, more so, of Greater London, or for acting as hospitals with linked staffing with all acute general municipal hospitals. There are four teaching hospitals within a mile radius of Charing Cross, nine within two miles, eleven within three miles and all within five miles. If the West London Hospital is included, this means thirteen within five miles of Charing Cross. Admittedly they are near railway termini, but dispersal over Greater London would suffuse the traditions and special skill of the great centres of medical learning among the non-teaching peripheral hospitals, both municipal and voluntary."

15. Historically, the present concentration of the teaching hospitals in the centre of London has arisen from the fact that they were founded to treat the sick poor and that at the time of their foundation the population was most thickly congregated in the central area.

16. The second point concerns the movement of population. In the Greater London area the population has tended to move from the inner to the outer parts and the population in central London has steadily fallen. [See Appendix K.] This movement had been in progress for several years before the war. Between 1931 and 1938 the population of the nine central boroughs in the County of London fell by about 12 per cent., and of the 20 outer boroughs of the County by about 6 per cent. It seems unlikely that the pre-war trend of population figures will be reversed after the war.

17. Post-war town and industrial planning may in the long run affect the population of London. There may, for example, be transfers from the congested East End to the less congested West End. Again, if business and industry are officially encouraged to move away from London to provincial centres, a further general fall in population, particularly in the centre, may be expected. Although no precise forecasts are possible, it seems prudent, in the light of evidence available, to assume that the population in the County of London is likely to be lower than in 1938, and may continue to fall. It is relevant to note that the population in 1938 was nearly half a million less than the peak population of approximately four and a half million in 1901.

18. The third fact to be noted is that up to the outbreak of war, despite the shifting of the population away from the central area of London, the hospitals maintained by the London County Council were admitting an increasing number of patients, while there was not any decrease in the total number of patients attending the parent teaching hospitals of the medical schools. This state of affairs was partly the result of an increase in hospital facilities for the population of the County of London; it was also due to the fact that patients residing outside the County attended the teaching hospitals in large numbers. Broadly speaking, the London teaching hospitals before the war drew approximately 57 per cent. of their patients from the County of London, about 33

per cent. from the four adjacent Home Counties and the remaining 10 per cent. from elsewhere. The quality of service which patients believe can be obtained in certain institutions influences them strongly in deciding which hospitals they will endeavour to attend. For this reason they may attend a hospital near their place of work in preference to one near their place of residence, and it is not an infrequent occurrence for patients and their relatives to travel quite long distances from their homes if they think that by so doing better medical attention will be obtained or if proper service is not available nearer home. The unquestionably high standard of treatment given at the London teaching hospitals has created for them a reputation which has attracted patients from some distance afield; but other factors have made their contribution. The concentration of specialists in the neighbourhood of Harley Street has imposed a measure of concentration on the hospital services; while the hospital facilities in the outer area of the County of London and still more in the adjoining counties have with some exceptions failed to keep pace, in scope and quality, with the growth of population and the demand for hospital treatment. The information gained from the Ministry of Health's survey of hospitals in London and the neighbouring districts shows that there has been a general deficiency of accommodation in outer London and the Home Counties, with a marked deficiency in some areas.

19. The Government's plans for a co-ordinated hospital service readily available to all in need of it, with a statutory responsibility on a public authority to provide the service, will presumably involve the development on a planned basis, in every area of convenient size, of a hospital or hospitals providing the full range of specialist services other than the very highly specialized types. If this development takes place to the extent that seems necessary on the periphery of London and in the Home Counties, there must inevitably be a considerable diminution in the demands made by the population of these areas on the teaching hospitals in the centre of London. In other words there is a strong likelihood that these hospitals will in course of time draw a smaller proportion of their patients from outside the County of London.

20. The last matter to which attention must be drawn concerns the facilities for the clinical instruction of students. On the basis of the pre-war entry of students and of our estimate of the hospital facilities to which a medical school should have access if it is to provide adequately for the clinical training of its students, every medical school in London lacked access to enough beds in some of the main categories. In the majority of the schools the deficiency was in most of the categories. Support for the view that more extensive facilities for clinical teaching are required is forthcoming from the memoranda of evidence from the medical schools. With one or two exceptions, all have expressed the opinion that their parent teaching hospitals should be considerably enlarged.

21. In the light of the foregoing, three questions have to be considered, namely

- (1) whether any of the medical schools at present situated in central London should be transferred as soon as possible to the periphery of the Greater London area;
 - (2) whether amalgamation of any of the smaller clinical schools is necessary or desirable;
 - (3) whether a substantial increase in the size of any of the parent teaching hospitals remaining in the central part of London can be recommended.
- Each of these questions will be considered in turn.

Should any of the medical schools be transferred to the periphery of London?

22. Save in the case of three of the medical schools (those of Charing Cross Hospital, King's College Hospital and St. George's Hospital) the evidence submitted by the University of London and the medical schools has been in favour of the schools and their parent hospitals remaining in the centre of London on their present sites, the hospitals being considerably enlarged so as to provide more adequate clinical teaching facilities. The reasons put forward in support of concentration in the centre of London relate in part to education and in part to hospital work. The main reasons given in evidence were as follows:—

Educational:

(i) Experience during the present war has shown that decentralised medical schools are to be avoided and has proved the advantages of having a medical school and its parent hospital in the heart of the city.*

(ii) "Proximity to the University, neighbouring medical schools and hospitals, museums, libraries, medical and scientific societies, forms one of the most valuable aids to achieving a really corporate and cultural life in a medical school."† A medical school isolated from these influences would sink to the level of a technical school.

(iii) If students are to have the advantages of a true university education, they must have contacts far wider than those provided within their own faculty.

(iv) A medical school must be easily accessible for both staff and students, and must, therefore, be in a central position with good communications. A considerable proportion of the students, particularly those who are less well off financially, live in various parts of London and the surrounding areas, either at home or with relations, and to them the expense and time of travelling are important considerations.

Hospital:

(i) Tradition. Some of the teaching hospitals have been located on their present sites for generations, in a few cases for centuries.

(ii) For a teaching hospital to fulfil its several functions it must be readily accessible. It must be within easy reach of the large community for whose everyday medical needs it provides; it must be conveniently placed for the hundreds of non-residents who work in it, and further, as a consultative centre for the whole country, it must be within a short distance of one or more of the main railway stations and large thoroughfares.

(iii) In view of the reluctance of many patients to go far from their homes, a reluctance which has been apparent even during the exceptional times when London was bombed, a certain number of hospitals will have to remain in the centre of London. This number should be made up first of all by the teaching hospitals.

23. Of the three schools which hold minority views on this question, King's College Hospital Medical School is in a different position from the other two, in that the hospital and medical school were transferred from the Strand to Camberwell in 1912. The authorities of the medical school consider that the move, the object of which was to place the hospital in a populous area requiring hospital services, has been to the advantage of the medical school; but

* In considering this argument it has to be remembered that the war-time arrangements of necessity involved spreading training over hospitals many miles apart. For example, the country unit used by St. Thomas's Hospital Medical School was 40 miles from St. Thomas's Hospital. The use of unsuitable buildings was an added difficulty in many cases.

† Memorandum of evidence from Middlesex Hospital Medical School.

they draw attention to certain difficulties which have been experienced, particularly the poor travelling facilities from Central London, and the adverse effect on financial support of the hospital.

24. Charing Cross Hospital and St. George's Hospital with their medical schools are at present situated in the central area, but are prepared to move. Charing Cross Hospital informed us that its Council is satisfied that the time has now arrived for the dispersal from central London of some at least of the great teaching hospitals, and is prepared to put its views to practical application in its own case. For some months the Council has been exploring the possibility of rebuilding the hospital and medical school as a single unit in a populous neighbourhood about 10 miles from the centre of London. Likewise, St. George's Hospital is of the opinion that when rebuilding become possible after the war some of the teaching hospitals should be moved outwards, in conformity with a planned system, towards the crowded suburban areas. The hospital suggested that it should transfer westwards, perhaps uniting with other hospitals in that area.

25. To reach a decision on this question it is necessary to balance the claims, to some degree conflicting, of medical education on the one hand, and the hospital service of London on the other, and again between providing teachers and students with the benefits of university life and ensuring adequate facilities for clinical training. In the result, considerable departures from the ideal of a teaching hospital centre may be unavoidable. Much weight should be attached to the educational reasons put forward in support of concentration of the medical schools in the central area. At the same time it must be conceded that the future hospital needs of London are not likely to justify the continued operation in the central area of all the teaching hospitals at present situated there. A reduction in the number of students trained in the London area is likely to be impracticable if the future need for doctors is to be satisfied. The only course, therefore, seems to be for some of the medical schools and their parent hospitals to transfer to the outer areas. While there may be some educational disadvantages, such a move would not be without counterbalancing gains even from the educational standpoint; and undoubtedly the hospital service in London would benefit greatly, since a better distribution and linking of hospitals could be effected in the inner area and the stimulating effect of teaching centres could be brought to the health services in the populous outer areas. It will be patent that such educational disadvantages as might arise could be entirely eliminated if it were ever decided to found a new university in one of the Home Counties, for instance, Middlesex; but this possibility is one which we can only view without comment.

26. We recommend that Charing Cross Hospital and its medical school should be transferred as soon as practicable to a suitable site in Middlesex, and that St. George's Hospital and its medical school should be moved to some other part of the outer area of London, possibly to a site in South London, where according to the information that we have received, there is a most pressing need for additional hospital accommodation. When they have been so transferred, it will be necessary for each of these medical schools to provide for the whole of the medical course,* and not, as at present, for only the clinical part, and it will be desirable that each should be of a size that will permit the economic development of a complete school, attaining university standard in all branches.

27. If this recommendation is implemented, the general distribution of the medical schools and their parent hospitals remaining in central London will be reasonably satisfactory, except in the area in which University College

* That is to say the pre-clinical and clinical parts. The arrangements for the pre-medical subjects should be as suggested in chapter 7, paragraph 17.

Hospital, Middlesex Hospital and the Royal Free Hospital are situated. University College Hospital is about a half-mile distant from Middlesex Hospital, and three-quarters of a mile from the Royal Free Hospital, and the latter is about one mile from Middlesex Hospital. Within one mile radius of University College Hospital, there are, in addition to Middlesex Hospital and the Royal Free Hospital, 19 other hospitals, six of which are general hospitals. It is possible that a number of these hospitals might be amalgamated or closed in course of time under post-war hospital plans; but about half-a-dozen are large special hospitals, such as the Hospital for Sick Children, Great Ormond Street, and the National Hospital for Nervous Diseases, Queen's Square, and these hospitals are so situated as to furnish the most suitable centres in London for the development of post-graduate medical education in their respective special branches.

28. Before the war the medical schools of University College Hospital and Middlesex Hospital were admitting approximately 75 and 80 medical students a year to the *clinical* part of the course. The London School of Medicine for Women, of which the Royal Free Hospital serves as the main teaching hospital, was admitting about 60 students annually to this part of the course. The London School of Medicine for Women required access to a larger number of beds for the purposes of clinical instruction and both Middlesex Hospital Medical School and University College Hospital Medical School would have found a wider range and variety of clinical teaching facilities an advantage. Apart from the possible decrease in course of time in the size of the population of the district, it is doubtful whether, under a co-ordinated hospital system, the area will be capable of providing adequate clinical teaching facilities for three medical schools and their pre-war number of medical students. The removal of one of these medical schools to another part of London may become advisable, not perhaps immediately after the war, but within, say, the next decade. On the present outlook, we consider that in such an event the London School of Medicine for Women should be the school to move.

29. From the standpoint of bringing medical teaching and research into close contact with the conduct of other branches of university study, University College Hospital Medical School is in the most favourable position of any medical school in London. This medical school and its parent hospital are on sites which adjoin University College. The latter provides for the pre-clinical training of students of the medical school. The relations between the two institutions are of the closest, in fact they constitute a university in themselves. To disturb the physical proximity of these institutions would be to sacrifice a valuable educational asset.

30. Middlesex Hospital Medical School has not the same advantage of close proximity to a school of the University concerned with other branches of learning than Medicine; but the following considerations point to its remaining, together with its parent hospital, in its present situation. Both hospital and school are on a common site. The buildings of the hospital are of modern construction, having been erected only a few years before the war. There are several specially housed and equipped institutions, such as the Bland-Sutton Institute of Pathology and the Courtauld Institute of Biochemistry. At the outbreak of war, the number of beds in use in the hospital was 540 ordinary beds and 74 private beds; but the hospital was not in full occupation of the whole of its new premises. It has accommodation for an additional 125 beds and land for the erection of further buildings. Provided the additional beds are distributed in accordance with teaching requirements and, in particular, the beds available for teaching in general medicine, obstetrics and gynaecology and children's diseases are suitably augmented,

the hospital should be capable of making adequate provision for almost the pre-war entry of students. If its resources were supplemented by an associated teaching hospital the medical school should have ample facilities.

31. The buildings of the London School of Medicine for Women are about half a mile away from those of the Royal Free Hospital. For its pre-war entry of about 60 students a year to the clinical part of the course the school should have had access for teaching purposes to about 600 beds excluding beds for infectious diseases, mental diseases and tuberculosis. Before the war, the bed complement of the Royal Free Hospital was 303 beds available for teaching purposes, and 24 private beds not available for this purpose. The disparity between beds needed and beds available was large. It would be twice as great if the school reached the optimum entry of 100 students a year to the clinical part of the course. We can see little prospect of the hospital needs of the area justifying an expansion of the Royal Free Hospital to this extent. While naturally the London School of Medicine for Women and the Royal Free Hospital may view the prospect of transfer with reluctance, we feel that they would be well advised to consider, at an early date and before the detailed scheme for a co-ordinated hospital service for London is settled, the question of moving to a site further from the centre of London. This site might, for example, be in one of the northern suburbs of London, such as Highbury. There, perhaps in conjunction with another hospital, they would have the opportunity, likely to be denied to them in their present locality, to build a centre providing all the teaching and research facilities required. Besides assisting their own teaching work, their transfer would also contribute to a better distribution of medical education in the London area.

Is amalgamation of some of the smaller clinical schools necessary or desirable?

32. One of the questions to which we have been asked to give special attention is, "whether certain of the smaller clinical schools should be amalgamated, as their continued existence as independent and completely self-contained units would no longer be necessary or desirable in any scheme for the co-ordination of hospitals in the London area." The idea that certain of the smaller medical schools in London should be amalgamated is not a new one. Abortive attempts have been made in the past to bring about a fusion of the schools of Charing Cross, St. George's and Westminster Hospitals. These attempts have been mainly educational in origin.

33. Four of the medical schools of the University of London come within the category of smaller clinical schools. These are the medical schools of Charing Cross, King's College, St. George's and Westminster Hospitals. In addition there is the non-university school of the West London Hospital, the future of which we have already discussed. The number of students admitted annually to the four schools of the University before the war, and the total number of beds available for teaching purposes in their parent teaching hospitals were as follows:—

Medical School.	Annual entry of students before the war for clinical studies. (Approx.)	Total number of beds for teaching in parent teaching hospital.
Charing Cross Hospital	...	293
King's College Hospital	30	328
St. George's Hospital	50	334
Westminster Hospital	33	400
	36	

34. From the point of view of the hospital services in the London area King's College Hospital is well situated. Charing Cross and St. George's Hospitals are badly placed. The position of Westminster Hospital, though not ideal, is not likely to present serious difficulties.

35. The memoranda of evidence show that the predominant opinion in the university and the medical schools is in favour of complete schools associated with parent teaching hospitals each having between 750 and 1,000 beds. One of the medical schools, namely, the Westminster Hospital Medical School, has recorded its support for the continuance of small medical schools. The desirability of fusing some of the smaller schools was referred to with approval by one medical school, and with disapproval by two of the smaller schools. The University did not express any view on the matter.

36. Excluding the West London Hospital Medical School, the following arrangements would be possible, theoretically:—

(i) The medical schools of Charing Cross and St. George's Hospitals should amalgamate with Westminster Hospital Medical School. In this event either Westminster Hospital should be enlarged to provide a complete centre for the combined school, or the existing premises of the hospitals and schools should continue to be used, the teaching and hospital departments being distributed among them. The second alternative would no doubt have to be adopted as an interim measure.

(ii) Charing Cross Hospital Medical School and St. George's Hospital Medical School should join with King's College Hospital Medical School and transfer to the site of the latter.

(iii) Either Charing Cross Hospital Medical School or St. George's Hospital Medical School should amalgamate with Westminster Hospital Medical School, and the other with King's College Hospital Medical School.

(iv) Charing Cross Hospital and St. George's Hospital should amalgamate and establish a combined school for the whole of the undergraduate medical course in the outer area of Greater London, say in the County of Middlesex.

37. The first of these possible arrangements is open to objection on the ground that it would militate against a necessary and desirable reduction in the extent of the provision for medical education in the central area of London. Balancing the various considerations and bearing in mind the need to spread the influence of medical education as widely as is possible without detriment to educational standards, we place the other possible arrangements in the following order of preference, namely (iv) (iii) and (ii); but we do not recommend the adoption of any of these arrangements. Instead we propose that each of the four schools should continue to be separate institutions, that the medical schools of King's College Hospital and Westminster Hospital should remain on their present sites, and that Charing Cross Hospital Medical School and St. George's Hospital Medical School, each with its parent hospital, should be transferred to the periphery of London, as we have recommended in paragraph 26 above.

What should be the size of the medical schools remaining in the centre of London and of the parent teaching hospitals associated with them?

38. This question may be approached on the same lines as those followed in considering the provision of clinical teaching facilities for medical schools in other parts of the country. In the first place each of the schools should aim to be of an economical size, that is to say each should, as a general rule, admit between 80 and 100 students a year to the clinical part of the course. An annual entry of this number of students will involve an increase in the size of some of the schools, and a reduction in the size of one of them.

In the latter case the desirability of a reduction is supported by the authorities of the school. As elsewhere, the following principles should be applied in arranging for clinical teaching facilities. First, the question should be considered against the background of the existing hospitals and the future hospital needs of the area. Second, where any new accommodation, necessary either in replacement or addition to secure an adequate hospital service in any area, relates to a branch of Medicine in which the main teaching hospital of the area has inadequate facilities for teaching purposes, it should be provided at or adjacent to the parent teaching hospital of the area, unless there is some strong reason for not doing so. Third, pending the attainment of the ideal concentration of clinical teaching facilities in the immediate vicinity of the medical school, such of the existing hospitals in the neighbourhood of a school as are needed to provide adequacy in clinical teaching facilities should be linked to the school for teaching purposes in the manner described in earlier parts of our report.

39. We think that if these principles are applied in the framing and carrying out of the post-war plans for a comprehensive hospital service for London, it should be possible for medical teaching centres, approaching closely to the ideal form, to be developed in due course around some, perhaps the majority, of the London medical schools. One important factor in this respect is likely to be the policy adopted with regard to the future of small special hospitals. If this policy should aim at the amalgamation of such hospitals with neighbouring large general hospitals, the development of proper teaching centres will be greatly assisted.

40. In the meantime, it will be necessary to arrange for each medical school to use for teaching purposes other hospitals in its vicinity besides its parent hospital. Otherwise none of the schools is likely to be in a position to provide its students with the range of clinical training and experience they should have. The question of which hospitals should become the associated teaching hospital of each particular medical school is one which will be settled most satisfactorily by negotiations between the county councils and other hospital authorities concerned on the one hand and the University of London and the various medical schools on the other. We do not therefore submit definite recommendations thereon; but by way of illustrating how the clinical teaching resources of the medical schools may be extended and improved, and in the hope that these illustrations may facilitate negotiations, we mention in Appendix L possible associated teaching hospitals for the various medical schools. These associations are in addition to those that will have to be made with local authority hospitals for the training in infectious diseases and mental diseases. We have not included the schools which we consider should be moved to the outer area of London, since the exact locality to which these schools should go is not yet determined.

UNIVERSITIES OF OXFORD AND CAMBRIDGE.

University of Oxford.

41. Before 1937 the medical school of the University of Oxford was in the main a pre-clinical one. "In 1937-39 a school of clinical research and post-graduate studies sprang almost full-armed from the Nuffield Benefaction."* During the war there has been in existence an improvised complete medical school for undergraduate students. The University has informed us that though, in the circumstances, these war-time arrangements have not been unsatisfactory, it does not wish to keep the undergraduate clinical school in its present form after the war. Instead it proposes, if the necessary funds are

* Memorandum of evidence from the University of Oxford.

available, to retain such a school in a specially modified form. The University wishes to develop an undergraduate medical school, the aim of which will be to provide for both men and women students who can be expected to become "teachers, investigators, and consultants rather than general practitioners."* The number of students would be small so that they might receive individual instruction, and the entrants would be carefully selected. Throughout the training, special emphasis would be placed on the scientific approach.

42. The normal practice before the war was for the medical students of the University of Oxford to take their pre-clinical studies in Oxford and then to go to medical schools in London or elsewhere for the clinical part of their training. Many of them took the degree of bachelor of medicine of Oxford University after being admitted to the Medical Register by virtue of another qualification. A condition attaching to the degree of bachelor of medicine at Oxford was, and still is, that the bachelor of arts degree of the University has first been obtained. The Oxford B.A. degree may be obtained in various ways. It may be a pass degree of the ordinary kind or it may be an honours degree in, for example, chemistry, or modern history or literae humaniores. The course followed by nearly all the medical students is to study animal physiology in the honours school of natural science. The subject is more relevant than any other honours subject, and human physiology for the Oxford First B.M. Examination† serves as an introduction to it. The course is not, however, a mere part of the medical curriculum. Honours physiology (including biochemistry) is taken by students who are not medical students; it is taught as an independent subject, not dogmatically but scientifically; and in biochemistry, the medical bias of the department is not allowed to crowd out the training of biochemists for agriculture and industry. A medical student has an excellent opportunity to acquire the habit of scientific approach to medical study and practice.

43. The University of Oxford has a traditional and important position as a centre for the study of the humanities, of languages, and of literature, and it is desirable that this position should not become unbalanced by the devotion of an undue proportion of the University's resources, intellectual and financial to the service of Medicine. With this fact in mind and with the object of avoiding dilution of the teaching and of the supervision of practical work, the University has contemplated limiting the annual entry of medical students to the pre-clinical part of the course to an agreed figure, which would probably be 50 or thereabouts.

44. The University proposes that the facilities for taking the clinical part of the course in Oxford should be designed for only about 20-25 students a year, not all of whom would necessarily have attended pre-clinical courses in Oxford. It considers that difficulties would not arise from the clinical part of the school being so much smaller than the pre-clinical. It argues that the absence of compulsion to take the clinical work in Oxford (the present war-time practice which would be continued) would in itself considerably reduce the initial entry in the first year to a much smaller figure in the first clinical year. It is thought that the special emphasis on the scientific approach would be a deterrent to some students. In any case, for the success of its project, the University would wish to be in a position to make a careful selection of those students likely to benefit most from the kind of scientific and clinical training and experience they would obtain in the clinical part of the Oxford school. It would be prepared to admit students who had taken their pre-clinical studies elsewhere.

* Memorandum of evidence from the University of Oxford.

† This examination corresponds to the Second M.B. Examination of other universities.

45. In addition to placing special emphasis on the scientific approach to clinical subjects, the University has drawn our attention to certain other features of its scheme. First, some form of the Oxford tutorial system would be developed for the clinical students, so that they would continue to receive individual attention and guidance. Second, with the collaboration of the Institute of Social Medicine, social and psychological aspects of disease would be stressed throughout the clinical work. Third, it is hoped that an exchange system would gradually be developed both with other British universities and with overseas universities whereby some students, for one reason and another, would be sent elsewhere for part, perhaps as much as a year, of their course; but even while so absent would remain under the direction of the University of Oxford and in contact with their tutors.

46. A doubt which at once springs to mind is whether it is wise for a medical student to spend the whole of his student days in the somewhat sheltered academic atmosphere of Oxford. This question has been considered by the University. In its evidence it referred to "a natural feeling that it is desirable to vary the student's environment and outlook and that a full course of Medicine in Oxford would mean too long in a somewhat 'rarefied' atmosphere." The statement continued "we agree that this is an undoubted danger of the suggested policy, but this danger will be greatly lessened by the fact that during his clinical years the student is working in the novel, realistic and practical environment of the hospital and of the field into which he will be introduced by the Department of Social Medicine. Moreover, under the proposed exchange system we hope to dilute the 'Oxford' atmosphere by the introduction of some students and hospital residents from other British schools, from the Dominions, and from other countries. In any case, we believe the advantages of preserving the academic attachment throughout the clinical years will more than offset any loss due to a protracted stay in Oxford."

47. The nature and size of the population in and around Oxford is such that an adequate range and variety of patients for teaching and research purposes could be obtained in the Radcliffe Infirmary and the other hospitals of the city. We understand that the hospital authorities welcome, in principle, the University's proposals for the clinical training of undergraduate students, and further that there is a fair prospect of a teaching hospital centre, such as we have described in chapter 3, paragraph 35, above, forming part of the post-war plans for the hospital service of the city.

48. The University's proposals outlined above are tentative and should be regarded as a general indication of the course which the University wishes to follow. On points of detail the University considers that there should be only the minimum of rigid planning and ample room for trial and error.

49. We recommend that the University of Oxford should be given the necessary financial aid to enable it to continue a small undergraduate clinical school after the war.

50. In the main we have been guided to this recommendation by our belief that in the years immediately following the war it will be particularly opportune for an existing undergraduate medical school to be given the necessary encouragement to develop on new lines. Those years, if used aright, can open a new era in medical thought and practice in this country. One radical experiment in the training of medical students promises a most effective means of fostering improvements, the benefits of which may well be beyond the range of present hopes. Indeed, the character and progress of British medical education in the next generation or so might be largely influenced by the results of such an experiment.

51. The kind of development we have in view is a medical school* that could re-plan from the foundations upwards the whole course of medical training; that could approach more nearly and more speedily than may be possible elsewhere the ideal conceptions in regard to staffing, accommodation, equipment, inter-departmental co-operation and the provision and control of facilities for clinical teaching; that could thereby demonstrate, practically, the value of, or defects in, these conceptions, and could point the way to better aims. We consider that the University of Oxford is well-suited, by tradition, by its actual and potential facilities, and by the outlook of those associated with its medical school, to undertake such an experiment. The University should be free to determine the exact nature of the experiment, and for that reason we refrain from expressing an opinion on the details of the scheme submitted to us; but we wish to make two suggestions. First, that the University in planning the clinical part of its undergraduate school should take the opportunity to review freely and critically the *whole* of the curriculum. Second, that, on the understanding that the quality of the training is not reduced, the University should endeavour to increase the entry to its pre-clinical departments up to about 80 to 100 students a year.

52. The development of an experimental school on these lines will be expensive, but the cost will be smaller if the school be at Oxford than if it be elsewhere, on account of the existence in Oxford of post-graduate departments with whole-time professorships in the various branches of clinical medicine. These departments have been built up since 1936 with the aid of Lord Nuffield's benefactions for the advancement of Medicine in Oxford. The University is satisfied that the retention of a small clinical school for undergraduate students will not conflict with or impair the work of the post-graduate departments and that from every point of view it is desirable that the staffs of these departments should have the experience and stimulation of teaching undergraduates, such work to be recognized as an important part of their duties.

University of Cambridge.

53. We have considered the question of whether, in future, provision should be made by the University of Cambridge for the clinical as well as for the pre-clinical training of undergraduate medical students. The question has been the subject of recent discussion, severally and jointly, by the University of Cambridge and the governing body of Addenbrooke's Hospital, which is the general hospital connected for many years with the University for teaching and research purposes. We are informed that there is a divergence of view between the two bodies. The attitude of the University of Cambridge is stated in the following resolutions passed unanimously by the Council of the Senate of the University:—

(1) The Council would welcome the establishment in Cambridge of the regional hospital (i.e. the main hospital centre of East Anglia).

(2) The Council would welcome proposals to establish a post-graduate school of clinical research in Cambridge.

(3) The Council would be prepared, if a post-graduate school of clinical research were established in Cambridge, to consider the possibility of establishing in relation thereto a pre-graduate school of clinical teaching.

54. The governing body of Addenbrooke's Hospital has expressed its desire to work with the University for the attainment of these objects; but it does not agree with the Council of the Senate of the University that the establishment of an undergraduate clinical school should be left as a mere possibility. It is feared that unless definite plans are made now, the opportunity of establishing such a school will be lost. Provided that the necessary monies are forthcoming for both capital requirements and maintenance, the hospital

governors are most anxious to see the establishment of an undergraduate clinical school as soon as possible. Naturally their principal motive is to raise the standard of work in the hospital. In their view the stimulus to the attainment of this objective would be greater from the association of the hospital with an undergraduate clinical school than with a post-graduate school of clinical research. They do not share the view of the University that, owing to the limitation of the number and variety of patients—due to the fact that Cambridge is not a very large town and is not the centre of a densely populated district—it would be impossible to provide in Cambridge clinical training that would be as attractive to the ablest students as the clinical training offered by medical schools in the large centres of population. The University fears that only the less intelligent students would take the clinical part of their training in Cambridge and that first-class men and women could not justifiably be advised to do their clinical training there. The governing body of Addenbrooke's Hospital, while admitting that any newly-formed school might have such an experience in the first years of its existence, finds it difficult to imagine that a medical school, having Cambridge University's scientific and cultural tradition behind it, could not soon rival any other medical school in the country, and in time attract the best teachers and students.

55. It has been the aim of the University to give medical students the best possible training in the basic laboratory sciences, and to allow them to go down after three or four years' residence in Cambridge to pursue their clinical studies in London or in one of the other centres of medical education. During their career at Cambridge the majority of these students prepare to attain the honours standard in part I of the natural science tripos. Most spend two years studying anatomy and physiology and one year studying two or all of the following:—organic chemistry, biochemistry and pathology. Instruction in all subjects for the natural science tripos is given from a broad and general standpoint, and the applications of science to medical practice are not unduly emphasized. Students whose ability and enthusiasm are above the average obtain a more advanced and intensive knowledge of the subject of their choice by subsequently attending courses for part II of the tripos. The number of students in any part II class is small, and it is beyond doubt that courses for this part of the tripos provide a most valuable training either for laboratory science or clinical medicine. The value of the scientific training which students receive at Cambridge is generally acknowledged. As a centre for pre-clinical studies, Cambridge has made vital contributions to learning and has acted as a stimulus to teaching and research throughout the country.

56. In the years immediately before the war the annual entry of medical students to the University varied from 150 to more than 200. We think that an entry of this number was too large and that after the war the University should take steps to prevent the entry ever exceeding 150. The provision of clinical training in Cambridge for 150 students a year is out of the question. A teaching hospital with at least 1,500 beds would be required. In 1939 the number of beds at Addenbrooke's Hospital was about 320. It is thought probable that the number which will be required, ultimately, to meet the needs of the area may be about 600. Of the additional beds some are likely to be of little value for teaching purposes, being needed for patients requiring highly specialized forms of treatment which scarcely come within the scope of undergraduate training. Even though the hospital expanded to this size, the number of students who could be given clinical training could not be more than 30 to 50 a year, or between 20 to 30 per cent. of the number pursuing their pre-clinical studies at the University.

57. While we appreciate the desire of the governors of Addenbrooke's Hospital to develop teaching and research in the hospital and have examined their

views most carefully and sympathetically, we have come to the conclusion that it would be very unwise to decide now on the establishment of an undergraduate clinical school in Cambridge, even as a distant objective. We consider that two developments must precede such a decision. First, the standard of the hospital services in Cambridge must be raised to a very much higher level than they have yet attained; second, active post-graduate medical departments must be built up.

58. The first of these developments will involve not only building extensions and alterations, but a very considerable growth in the service of specialists in the area. In view of the limited scope for private practice, it is probable that, if clinical specialists of outstanding ability are to be attracted to the area in sufficient numbers, whole-time and part-time salaried posts will have to be provided on a wider scale than may be necessary in larger centres of population.

59. The development of a special type of post-graduate medical school in Cambridge is most desirable. Apart from the effect on the health service of the area, it would benefit the pre-clinical departments to have better contacts with clinical practice, teaching and research, than have existed hitherto. With the improvement of the hospital service of the area the establishment of post-graduate medical departments should be practicable. Unlike an undergraduate school, which from the outset would have to provide adequate teaching facilities in all branches, it would be feasible to develop post-graduate departments piecemeal, as the various branches of the hospital service of the area were raised to the requisite standard.

60. The Council of the Senate has suggested that research and training units for specialists might be formed in experimental medicine, radio-therapy, and psychiatry, basing these units on an association between the hospital and the strong departments already existing in the University in the fundamental sciences of bio-chemistry, pathology, biology, physics and experimental psychology. So far as the latter departments are concerned, no university in Great Britain could offer greater advantages. The clinical side of the work would demand a large measure of help from Addenbrooke's Hospital. We hope that the University and the governors of Addenbrooke's Hospital will collaborate in establishing, as soon as facilities permit, the three units mentioned above. In expressing this hope we wish to emphasize that we think it important that the activities of these units should not be limited to clinical research but should include post-graduate instruction for practitioners from this country and overseas who wish to gain advanced and specialist training in the subjects in question.

THE ESTABLISHMENT OF NEW MEDICAL SCHOOLS.

61. Several of our witnesses have suggested that new medical schools for undergraduate students should be established after the war. The London County Council submitted a statement of the reasons why it wished to found, in the not too distant future, a medical school of its own. Other witnesses were interested in the question of providing medical schools for certain sections of the country which at present are without such schools, and in this connexion suggested that such places as Exeter, Hull, Leicester, Nottingham and Southampton, which, though they have not universities, have independent university colleges, might be considered as possible new centres. We received statements setting out the views of the interested bodies in two of these places, namely Leicester and Nottingham, but not from bodies in the other places mentioned.

62. The case for the establishment of a new medical school by the London County Council was based upon the view that "no medical school can provide a complete curriculum within its own walls" and that "with increasing specialization only a hospital system can provide all that a medical student

needs." The London County Council made the following recommendation:—
 "The complete medical service provided by the Council, including both preventive measures and also treatment for patients suffering from every variety of ailment occurring in this country should be used both (a) by augmenting the resources available for teaching in the London teaching hospitals and, also, (b) by the establishment of an undergraduate medical school based on one of the Council's larger general hospitals and utilizing other hospitals and institutions for teaching purposes as required."

63. The Council contemplated that the school should be a school of the University of London and appreciated that the use of one of its general hospitals as the parent teaching hospital of the school would involve the fulfilment by the hospital of certain conditions (for example, in respect of administration, staffing and control of admission of patients) deemed necessary for the success of the training arrangements.

64. The advocates of additional schools in other parts of the country have based their case on two premises. First, that the number of medical students trained each year will have to be considerably increased and it will be beyond the capacity of the existing schools to cope with the whole of the increase. Second, that in certain areas medical schools will be required in order that an adequate development of the hospital services of these areas may be secured.

65. Our general conclusions on the question of establishing new schools are as follows:—

(a) It is the better policy to develop the existing schools to their full capacity before embarking upon any new institutions. The financial resources and the supply of suitably qualified teachers that are likely to be available, even under the most favourable conditions, will for a considerable number of years after the war be wholly needed for the full development of the existing schools.

(b) While there is no doubt that a medical school can be a stimulus to the hospital service of the area in which it is situated, the desire to provide this stimulus is not a sufficient reason in itself for the establishment of a medical school in an area which is without one. First, there must be proof of the national need for another school; next, and even more important, it must be clear that a school at least of the average standard of existing schools can be provided in the area.

(c) Any proposal to develop a medical school in one of the places which has an independent university college should be deferred until such time as the university college concerned has become fully established as a university. This conclusion is dictated as much by what appear to be the best interests of the university colleges as by the view that, for the attainment of a proper standard, a medical school must be an integral part of a university. Though sympathizing fully with the aspirations of the university colleges in question we feel bound to commend to them the advice which the University Grants Committee tendered to the universities in its report of 1923-24, namely that each "will be well advised to consolidate the departments it already has, and to fortify what we may call its academic foundations before reaching out towards new developments." This advice seems to us especially apposite when the contemplated new development is such an ambitious and complex one as the founding of a medical school.

(d) The number of undergraduate medical schools in the London area is already large, possibly too large, and we are unable to recommend additions to their number. In our view the two most pressing London problems are (i) to secure adequate facilities for the existing undergraduate

schools and (ii) to organize better, and to develop intensively, the exceptional facilities of London for post-graduate medical education. Neither of these problems can be solved without the cordial co-operation of the University of London, the London and neighbouring County Councils, the medical schools and the teaching hospitals; or without proper use being made of the hospital and medical services maintained by these County Councils. Their solution will have effects beyond the boundaries of the metropolis and we feel confident that the Councils will regard them as matters to which prior thought and attention must be given.

(e) Although we do not consider it opportune at the present time to establish a new medical school in London, we think that the possibility of a local authority general hospital becoming the parent teaching hospital of one of the existing medical schools,* perhaps removed to a new locality, should be investigated. Should such an arrangement prove practicable it might open the way to the surmounting of some of the difficulties that at present beset the organization of medical education in the metropolitan area.

Chapter 7.

PRE-MEDICAL AND PRE-CLINICAL STUDIES.

INSTRUCTION IN THE PHYSICAL AND BIOLOGICAL SCIENCES.

Recommendations of General Medical Council.

1. The General Medical Council* has recommended that before a student is admitted to the "medical curriculum proper" he shall have passed a recognized preliminary examination in general education and then an examination, conducted and recognized by the licensing bodies, in the following subjects:—

Chemistry (theoretical and practical), the elementary principles of general and physical chemistry, and of the chemical combination of elements, including carbon.

Physics (theoretical and practical), the elementary mechanics of solids and fluids, the elements of heat, light, and sound, electricity and magnetism.

Biology (theoretical and practical), the fundamental facts of vegetable and animal structure, life-history and function; and an introduction to the study of embryology.

The latter examination is usually known in England and Wales as the First Medical Examination, and in Scotland as the First Professional Examination. We shall refer to it by the former title.

2. For many years there has been a widespread dissatisfaction with this examination, and, what is of greater importance, with the training which medical students receive in the physical and biological sciences. The well-founded criticisms emanating from many quarters have led to considerable discussion both by the medical schools and by those associated with secondary education. One question that has been much discussed is whether medical students should be permitted to prepare for the First Medical Examination at school or should be required to do so at the universities. In view of the obvious bearing which this question has on the organization of the medical schools we have felt bound to pay considerable attention to it.

* See chapter 16.

University courses in pre-medical subjects.

3. All the universities and medical schools, with the exception of those which are clinical schools only, provide courses in chemistry, physics, and either biology, or (more usually) botany and zoology, in preparation for the First Medical Examination. Except at certain of the medical schools in London, these courses are given in a university faculty of Science by members of the regular staff of that faculty, and usually, though not in every case, are specially arranged for medical students. At the present time well over one-half, possibly three-quarters, of the medical students attend courses in these subjects at the universities and medical schools. Such attendance is obligatory on every medical student at the Scottish universities. At the other medical schools complete or partial exemption from attendance at the courses and from the examination may be gained by a student who holds a Higher School Certificate in the requisite subjects. Some universities permit students to sit for the examination as external students after a course of instruction at school or some other non-university institution, such as a polytechnic.

Views of university medical schools.

4. The present arrangements are not yielding satisfactory results and the preponderance of opinion in the university medical schools, as represented to us, is in favour of students being required to take the courses leading to the First Medical Examination in the universities. Among the reasons put forward in support of this view are (i) that if the necessary standard of knowledge of these subjects is obtained at school, it has often been gained at the expense of general education, owing to undue specialization at too young an age; (ii) that the training for the First Medical Examination should have a definite medical trend and it is difficult to ensure such a trend in schools where future medical students are in a minority and the teachers are not in direct touch with medical thought and needs; (iii) that in many of the secondary schools the standard of training in chemistry, physics and biology, particularly the last named, is not of the required standard, on account of staff, laboratory facilities and equipment.

The committee's views and suggestions.

5. While recognizing the force of these arguments in relation to present conditions, we feel considerable doubt whether the course favoured by the medical schools is the best one to follow, either in the interests of education in general or medical education in particular.

6. In view of the increasingly important contributions of the physical and biological sciences to the science and practice of Medicine, it is essential that medical students should be properly instructed in the general principles and methods of those branches of Science which have important applications to Medicine. We think that part of this instruction can be given adequately only in the medical schools. At the same time it must be recorded that in the case of many of the students who prepare for the First Medical Examination at the medical schools at the present time, the knowledge gained of even the elementary principles of chemistry, physics and biology is superficial and ephemeral because acquired too hurriedly and under conditions which fail to stimulate the student's interest or to satisfy his mind as to the relation of these subjects to the rest of his medical studies. To many of these students the purpose of these courses is obscure and they tend to regard them as an obstacle to be surmounted as quickly as possible and then forgotten. The abrupt ending of physics, and largely of biology and chemistry, after the First Medical Examination has been passed, is a fault in education similar to the tendency among students to end thought in anatomy and physiology after the Second Medical Examination has been surmounted.

7. In our opinion this state of affairs is not likely to be remedied completely unless the training which a medical student needs in the physical and biological sciences is begun at school as part of his general education and is continued at the medical school, in close association with the training in anatomy and physiology, as part of his professional education. We feel confident that the training which could be arranged as a result of such a division would be more conducive to the acquisition by students of a scientific outlook and a fuller appreciation of the importance to Medicine of the work in Science. Far from being detrimental to the student's general education, it would secure that that education was of the necessary breadth.

8. Before a student can profit by instruction in the relations of the physical and biological sciences to Medicine, he must have had a thorough grounding, without any medical trend, in the basic principles and methods of these sciences. It appears to us that a student would profit most by this elementary grounding if he could obtain it as part of his general school education over a period of years.

9. All bodies and persons concerned with the training of medical students are agreed that the general education of an intending medical student should continue on broad cultural lines right up to the time he begins to concentrate on his professional studies, and that it should by then have reached a good standard. We are in full accord with this opinion. At the same time we share the view, which is widely held, that a general education cannot nowadays be regarded as sufficiently liberal unless it includes an adequate training in the principles and methods of general science. In our opinion such a training in general science is the foundation which an intending medical student needs for his subsequent special study of the physical and biological sciences.

Changes necessary to give effect to the committee's suggestions.

10. Our view on this matter presupposes amendments in the scheme of school examinations, and changes and improvements in the teaching of Science in the secondary schools. In so far as these changes and improvements are dependent upon the provision of adequate laboratory facilities and a sufficiency of suitably qualified teachers, they cannot be fully accomplished for some years, but we feel confident that they constitute a practical objective, if the universities and the authorities responsible for secondary school education will co-operate to this end. The present time provides a particularly favourable opportunity for concerted action in view of the attention which the Government is giving to post-war educational reforms.

11. The Norwood Committee on The Curriculum and Examinations for Secondary Schools in England and Wales, has recommended that the existing Higher Certificate Examination should be replaced by a School Leaving Examination taken at the age of 18 years or older. Should this recommendation be adopted and the examination satisfy certain conditions mentioned later, we feel that success in this examination in general science, English and other subjects, including preferably another modern language and history, could reasonably be accepted, in place of the First Medical Examination, as entitling a student to admission to "the medical curriculum proper".

These conditions are as follows:—

(a) The examination is so planned and conducted that it precludes excessive specialization such as occurs in many schools under the present scheme for the Higher Certificate Examination.

(b) The syllabus in general science involves instruction over the greater part of the pupils' school career and not merely in the last two years, and is not a special one for medical students, but one which is suitable

for all pupils, whatever may be the nature of their later studies. To have a special syllabus for different classes of pupils would put an undue and unnecessary strain on the schools and, so far as intending medical students are concerned, would result in the continuance of the present unsatisfactory practice whereby such pupils form a small segregated group for a considerable part of their work during their last two years at school. Even in the largest schools the number of pupils intending to follow a medical career will be small.

(c) Both in the teaching and at the examination, the subject of general science should be treated non-vocationally, attention being concentrated on the appreciation and assimilation by the student of general principles and methods, rather than on the accumulation by him of a mass of purely factual information. The standard of the examination in the subject should lie between the "subsidiary" and "principal subject" standards of the present Higher Certificate Examination. All the medical schools should agree to accept this standard.

12. In Scotland, the Senior Leaving Certificate is taken at about the age of 17 years after a five years' course. Some pupils remain at school for a further year and take additional subjects or continue the study of certain subjects to a higher standard. Every pupil is required to study Science during the first three years of the course. The scheme is a general one, with physics, chemistry and—properly—biology; but we have been informed that the biological part of the scheme tends to be somewhat neglected owing to the scarcity of teachers qualified to give instruction in that branch of Science. The study of Science beyond the third year is optional.

13. Candidates at the Senior Leaving Examination may enter for an examination in a subject on either the higher or the lower grade. Papers are set in the higher grade in physics, chemistry, botany, pure zoology and zoology and human physiology, and a candidate may choose any two of these subjects. The standard of the examination is approximately mid-way between that of the present School Certificate and Higher Certificate Examinations in England.

14. So far as regulations are concerned, the only changes necessary to give effect in Scotland to our proposal are (i) the introduction of general science on the higher grade as a subject which may be chosen by candidates for inclusion in their group for the Senior Leaving Certificate, and (ii) the recognition of a pass in that subject by the Scottish Universities Entrance Board for the purpose of their "Certificate of Fitness" for entry to a university.

15. As has already been indicated, changes in the secondary school curriculum and in the regulations for the school examinations will not be enough. An adequate supply of teachers, qualified to give instruction in general science in the secondary schools, will also be required. The following statement was made in a memorandum submitted to us by the Scottish Education Department: "... it is most desirable that all pupils should receive, as part of their Science course, more instruction in Biology than they receive at present in the majority of schools; but this reform cannot be achieved until a sufficiency of suitable teachers is available. This in turn must depend upon the institution by the Universities of a degree course in 'General Science' which could be taken by students who intend to become teachers. The courses in Science provided by the Scottish Universities at present tend to produce teachers with a specialist's knowledge of one branch of Science alone (Physics or Chemistry, as a rule) and too little knowledge of the others. The limited range of these teachers' scientific training exercises in its turn a restrictive effect on the scope of Science work in the

schools". A similar statement could well be made in respect of conditions in England and Wales and we wish to commend this matter to the serious attention of all the universities in Great Britain for early consideration, and, we hope, action.

Interim arrangements.

16. If the changes that we have indicated are made in the secondary school curricula and examinations, we think it can be assumed with confidence that in due course almost all medical students will obtain their elementary training in Science at school. Nevertheless for many years, there will be a number of men and women who, as regards ability, general education and character, are suitable for the profession of Medicine, but either have not had any training or have not had adequate training in Science at school. In course of time the number should become relatively small, but arrangements will have to be made to enable these students to receive the necessary instruction in the physical and biological sciences before they enter upon the medical curriculum. We recommend that they should be required to attend a special pre-medical course in general science, extending over one academic year, in the Science faculty of a university or university college, and to pass a university examination of approximately the same standard as the examination in general science in the senior school leaving examinations. The course should be conducted by members of the staff of the Science faculty.

17. In London, the ultimate objective should be to concentrate the students taking this special course in the colleges, such as University College, King's College, Bedford College and Queen Mary College, which have several faculties. Some time may elapse before this objective can be reached, partly because, for several years, the number of students wishing to take the course may exceed the number that these colleges can admit, and partly because it may take time for those medical schools that now have departments in physics, chemistry and biology to make the necessary adjustments in staff. Co-operative action between the university, the medical schools and the colleges concerned would facilitate progress.

18. While, in scope, the syllabus might have regard to the student's later medical studies, we feel that neither the teaching nor the examination should have a vocational bias. To emphasize this fact we suggest that the examination might be known as the Pre-medical Examination rather than the First Medical Examination.

19. We wish to emphasize that in our opinion entry to this examination should be restricted to those whose general education is of such a standard as will permit their entry to the medical course and who have prepared for the examination at a university or university college. We consider that it would be undesirable to allow candidates to prepare for it during their last two years at school, as some universities at the present time permit pupils to prepare for the First Medical Examination. The latter practice is one that in our view should be discontinued at the earliest opportunity.

Nature of the training to be given in the medical schools.

20. If, as we have assumed, students come to the medical schools with a good elementary grounding in general science, relatively little time would have to be devoted to the special teaching of the physical and biological sciences as part of the students' professional education. Students will derive most interest and benefit from this teaching if it is given as part of, or in association with, the training in anatomy and physiology. We suggest that the special teaching of biology should be incorporated in the teaching of anatomy and to a lesser extent in the teaching of physiology, so that the

whole course forms one progressive phase of education. The instruction in chemistry and physics should be given concurrently and in close association with the course in physiology. Most medical schools already provide instruction in chemistry as part of, or in connection with, the course in physiology; but similar arrangements have not been made in respect of physics.

PRE-CLINICAL SUBJECTS.

21. By "pre-clinical" subjects we mean anatomy (including biology); physiology (including bio-chemistry and bio-physics); the elements of normal psychology and of pharmacology.

Relation of pre-clinical to clinical teaching.

22. The organization of the medical curriculum into pre-clinical and clinical phases has led to a partial segregation of these elements in medical education, to the detriment of each. The character of the student's training in the pre-clinical subjects largely determines his mental attitude and intellectual methods in the clinical part of the course. It is, therefore, most important that the clinical teachers and the teachers of the pre-clinical subjects should co-operate in securing continuity in the curriculum and a proper dovetailing of their respective teaching, so that the student's progress through the whole of the medical course may be smooth and logical.

23. The position of the pre-clinical departments in relation to the universities on the one hand and the teaching hospitals on the other hand differs greatly in the various schools. The ideal to be aimed at, although, owing principally to geographical difficulties, it may not be capable of full realization in every case, is for these departments to be organized in the closest association with other departments of the university, and with the parent teaching hospital of the medical school. Both teachers and students benefit from contacts with those in other faculties and from the university life that may be enjoyed outside the lecture room and laboratory. It is to the advantage of medical education that the segregation of medical students from students in other faculties should be postponed as late as possible. On the other hand the need to bridge the gap between the pre-clinical and clinical studies renders the connection between the pre-clinical departments and the teaching hospital of great importance. The closer the link the better the opportunity for stimulating co-operation between pre-clinical and clinical workers in teaching and research, and for securing that the distinctive features of pre-clinical education continue to influence the student in the clinical period.

24. Special measures, though not necessarily everywhere of the same type, are needed for bridging the gap. The task would no doubt be materially assisted by an overlap of personnel engaged in the two periods, as, for example, by junior clinical specialists, or graduates preparing themselves to become specialists, serving an apprenticeship and doing research work in a pre-clinical department. Freer access to patients than exists in many places at the present time for the teaching of anatomy and physiology would be advantageous. Much physiology as well as anatomy can be taught on the living subject and the teaching in both subjects gains very considerably if at the same time students are presented with patients illustrating deviations from the normal.

Co-ordination between pre-clinical studies.

25. A better educational approach would be provided by the closer integration of the teaching of anatomy, physiology, bio-chemistry and pharmacology. At least one medical school is seriously considering a proposal that anatomy and physiology should be taught together as two aspects of human biology.

This proposal appeals strongly to us and we hope that this school, and perhaps others also, may be moved to adopt it. We must admit, however, that it is unlikely that the medical schools generally would favour such a proposal at the present time. Since the two subjects will probably continue to be taught separately, we wish to stress that there is much to be gained from chronological co-operation in the presentation of material. Points of contact might, with advantage, be dealt with at joint classes.

26. With a view to securing the proper organization of the pre-clinical studies, we recommend that there should be a committee, consisting of the heads of the pre-clinical departments together with certain members of the staff of the clinical departments, which would be responsible for organizing and directing the pre-clinical studies, including such teaching in the physical and biological sciences as, under the proposal made in the preceding section, would fall within the medical course.

Curricula of Pre-Clinical Studies.

27. There is an urgent need in every school for a new viewpoint on the part of the teachers of the pre-clinical subjects and for the drastic elimination from the curricula, and therefore from the examinations in these subjects, of a mass of detailed information, which serves only to clutter-up the student's mind and to deaden his interest in subjects that can and should make the liveliest appeal to him. With regard to the change of viewpoint, there is growing recognition that it is on the teachers of the pre-clinical subjects that the responsibility rests for laying the foundations of the student's realization of the importance of health and the prevention of disease.

28. Reference to the arrangements for the teaching of pharmacology is made in chapter 10, paragraphs 10 to 14, and for the teaching of psychology in chapter 13.

29. Whether the medical student engages eventually in research, public health or clinical work, the necessity or opportunity continually arises to record and classify observed facts and to deduce their meaning. In the absence of some elementary instruction on these matters, either this work tends to be regarded as burdensome or, if the urge for it is there, the ability to do it efficiently is lacking. Contributions to medical and surgical journals have frequently shown a lack of logic and statistical method, and a higher standard in this respect is now being demanded than in the past. Furthermore, the Medical Research Council's Classification of Diseases and Injuries has now provided the foundation stone for the scientific recording of morbidity; and medical students will have to be familiar with the technique of morbidity classification as well as that of death certification. Instruction on these points can best be given by (a) a short course during the pre-clinical stage of training on the elements of statistical method, and (b) further teaching during the clinical stage on the best methods of analysing clinical data, the classification of diseases and injuries, and the importance of accurate death certification.

Supplies of Anatomical Material.

30. For many years the number of subjects that the medical schools have been able to obtain has been below the number required for the proper teaching of anatomy. The deficiency would have been much greater but for the efforts of successive Inspectors of Anatomy, and has been due to causes outside their control. For various reasons, this deficiency seems certain to continue and to become greater. In view of the obvious importance to medical education, and through education to the health service of the country, of ensuring an adequate supply of subjects for dissection, special attention

is drawn to this question and it is recommended that the Government should forthwith consider whether the present serious difficulties can be mitigated by administrative action, or whether it is inevitable to contemplate the amendment of the Anatomy Acts, 1832 and 1871.

Research.

31. Stress has already been laid on the need for providing the staffs of the pre-clinical departments with adequate time and facilities for research. The excessive demands of teaching, which result from present understaffing, react unfavourably on both the quality and volume of research. There is a growing need for team-work directed to the solution of the increasingly complex problems in anatomical and physiological research. Post-graduate students reading for higher degrees perform a most useful function in research teams. In most universities there is need for greater financial provision by way of studentships, scholarships and maintenance grants, similar to those awarded by the Department of Scientific and Industrial Research for students in training for research, to encourage and assist post-graduate students to work as members of research teams in the fields of the pre-clinical subjects.

THE ARRANGEMENTS OF THE MEDICAL SCHOOLS IN LONDON FOR PRE-MEDICAL AND PRE-CLINICAL STUDIES.

32. In the letter of the 7th April, 1942, which amplified our terms of reference, we were asked to consider specifically the arrangements in the medical schools in London for pre-medical and pre-clinical studies.

Pre-war arrangements.

33. Before the war, pre-medical courses of instruction in chemistry, physics and biology (or botany and zoology) in preparation for the First Medical Examination were held at the following nine colleges and schools of the University of London:—King's College, Guy's Hospital Medical School, the London School of Medicine for Women, Middlesex Hospital Medical School, Queen Mary College, St. Bartholomew's Hospital Medical College, St. Mary's Hospital Medical School, St. Thomas's Hospital Medical School and University College. Courses in the pre-clinical subjects (anatomy, physiology, etc.) were given at these institutions, with the exception of Queen Mary College, and also at the London Hospital Medical College.

34. King's College and University College were not concerned with the clinical part of the medical course. The former had an arrangement to provide for the pre-medical and pre-clinical studies of medical students of four schools which provided only clinical training, namely the medical schools of Charing Cross Hospital, King's College Hospital, St. George's Hospital and Westminster Hospital. University College had a similar arrangement with University College Hospital Medical School. Since 1917-18 Queen Mary College and the London Hospital Medical College have had an agreement whereby courses in the pre-medical subjects are given at the former for students of the medical college. Queen Mary College, unlike King's College and University College, does not provide courses in the pre-clinical subjects.

35. At King's College, Queen Mary College and University College, the arrangements for teaching the pre-medical subjects were similar to those existing in the universities outside London. Although the courses were specially or primarily arranged for medical students, the teachers were members of the faculty of Science and were concerned also with the training of science students. At the other schools of the University of London, at which instruction was given in the pre-medical subjects, the staff, in so far as they were whole-time, were concerned only with medical students.

36. The staff who in 1938-39 were engaged in teaching the pre-medical and pre-clinical subjects at the various institutions named (with the exception of Queen Mary College, for which details have not been obtained) and the number of medical students who attended the courses of instruction in the pre-medical subjects in that year are set out in Appendix M.

Past history of proposals to concentrate the teaching of pre-medical and pre-clinical subjects.

37. It is helpful to look at the past history of the proposal that the teaching of the pre-medical and pre-clinical subjects to medical students in London should be concentrated in a few institutes.

38. The Royal Commission of 1892, commonly known as the Gresham Commission, recommended that, in the case at least of the smaller medical schools in London, the teaching in the following subjects should be concentrated in one or two institutes:—physics, chemistry and biology, anatomy, physiology, pharmacology and materia medica, pathology, hygiene and public health, and forensic medicine. Following the report of this Commission, Statutory Commissioners were appointed by the University of London Act of 1898 to make statutes and regulations for the University. These Commissioners introduced the following words into the university statutes "The Senate shall use its best endeavours, whenever practicable, to secure common courses of instruction for Internal medical students in the Preliminary and Intermediate portion of their studies under appointed or recognized Teachers at one or more centres." In the report which accompanied the statutes, the Commissioners pointed out that the sciences named by the Gresham Commission as those in which they thought concentration desirable, could be divided into the following groups:—

- (a) Physics, chemistry and general biology.
- (b) Anatomy and physiology.
- (c) General pathology, including bacteriology and pharmacology.
- (d) Hygiene and public health.

39. The Statutory Commissioners expressed the opinion that the advantages of concentration were greater, and the difficulties and disadvantages less, in the first group than in the second, in the second than in the third. The advantages of concentration in the first and second group were considered to be so strong that the Commissioners took the view that concentration in these groups should be effected without delay. The Senate attempted to give effect to the Statutory Commissioners' recommendation, but the attempt failed.

40. The Haldane Commission on University Education in London (1913) came to the conclusion that the reasons for concentration no longer held good to the same extent as formerly and that so far as chemistry, physics, and biology were concerned the chief difficulty in arranging for adequate instruction was want of time. After emphasizing that the existing arrangements were unsatisfactory, the Commission recommended that, normally, the training in these sciences should be given at school, and that those candidates who were unable to obtain the necessary instruction at school should be provided for "either in the science laboratories of the University itself or in institutions recognized for the purpose by the University."

41. With regard to anatomy and physiology, the Haldane Commission, believing that it was necessary to have "University education in the whole range of the medical curriculum," came to the conclusion that, if clinical instruction is to be organized on a university basis, the case for the concentration of the pre-clinical subjects loses its force and the proper course is

to provide for the teaching and study of anatomy, physiology and pharmacology along with the several branches of pathology and in close proximity to the clinical work of the hospital. The Commission pointed out that there is no hard and fast line between the science of Medicine and the ancillary sciences. "Their range has been to some extent accidentally determined. They deal with phenomena which are separately considered and systematically worked out largely for the sake of convenience; therefore they overlap, and pass over into each other, so that it is possible for those engaged in the study of one branch to obtain assistance from those who are working at another, and especially for those who are pursuing the most concrete and complex science of clinical medicine, to obtain assistance and direction from them all. Whenever the matter is looked at from this point of view, it becomes clear that, in so far as concentration means the separation for purposes of teaching and study of the intermediate or final scientific subjects from the scientific study of clinical medicine it is a mistake. The real end is to raise the teaching and the study of all subjects which bear upon medical science to a university level, and to provide for them in the Faculty of Medicine in as close proximity to each other as possible, so that there may be not only natural and easy communication between the professors of science and those of clinical medicine, but also reciprocal assistance in the investigation of problems which occur to either."

42. We are in general accord with the views expressed by the Haldane Commission.

Future action.

43. With regard to the pre-medical studies, our recommendations concerning the future arrangements in London have been stated in paragraph 17 above. With regard to pre-clinical subjects, we consider that the close proximity of the pre-clinical and the clinical departments must be the overriding consideration, and that every medical school in London should as a general rule, provide for both the pre-clinical and clinical parts of the undergraduate course of training. It should be noted that each one of these schools will, under our recommendations, become as large as most of the provincial schools. If (i) our recommendations with regard to pre-medical studies are implemented, (ii) each of the medical schools in London attains its optimum size, and (iii) the necessary finance is forthcoming, each of the schools should be able to provide pre-clinical departments staffed and equipped in accordance with university standards.

44. Should Charing Cross Hospital Medical School and St. George's Hospital Medical School carry out their proposal, which we support, to move to the outer area of London, it will be necessary in our opinion that they should discontinue their present arrangements with King's College and should develop their own pre-clinical departments. When they do so, the only purely clinical schools in London will be those of King's College Hospital, Westminster Hospital and University College Hospital. The first two while drawing attention to certain disadvantages, arising solely from the distance that separates them from King's College, stated in their evidence that, on the whole, the existing arrangements with that college have worked satisfactorily. For some time at least these arrangements should continue. If in due course King's College Hospital Medical School should be enlarged to admit 80 to 100 students a year, the question of its having its own pre-clinical departments will have to be considered; until then it could not provide pre-clinical departments of the standard of those at King's College. At the present time

the likelihood of Westminster Hospital Medical School expanding to a size which would make it economical for the school to provide teaching of the requisite standard in the pre-clinical subjects is remote.

45. In view of the close proximity and relations of the two institutions, a disturbance in the arrangements between University College and University College Hospital Medical School would be a mistake.

Chapter 8.

PATHOLOGY.

1. "Pathology, medicine and surgery are not three separate sciences but one science, for physicians, surgeons and pathologists can be distinguished from one another only by the differences in the methods which they employ in the pursuit of one common aim,"* that aim being "a knowledge of diseases, of their causes, progress and consequences, of their cure and prevention."* This truth is fundamental to any consideration of the future organization of the pathological services and of pathological teaching. The methods used by the pathologist in the study of disease being, broadly speaking, the methods of the laboratory, some pathologists have tended to be regarded and to regard themselves as persons whose interests and work were confined within the walls of their laboratories. In some medical schools the tendency has been for the pathologists to retire into academic seclusion and become the depositories of academic lore on disease rather than full collaborators with clinical and other specialists in the work of curative and preventive medicine.

2. Before the war there were the beginnings of a movement towards greater collaboration between pathologists and clinicians. The exigencies of war have accelerated this movement. At the outbreak of war well-staffed and well-equipped laboratories were established, under the auspices of the Ministry of Health and the Medical Research Council, at suitable places throughout the country for the bacteriological control of epidemic disease. The pathological laboratories of some of the London teaching hospitals were removed from the central area of London to places in the sectors assigned to those hospitals. In connexion with the Emergency Hospital Scheme a beginning has been made by the Ministry of Health on a plan to provide a co-ordinated pathological service for the whole country by establishing pathological laboratories in places where they are most needed, and linking laboratories in the smaller towns to laboratories of the nearest medical teaching centre. Under this plan, professors of pathology in the universities, or their deputies, have been appointed as regional advisors in pathology, while senior pathologists at hospitals have acted as supervisors of laboratories in their area. In Scotland, too, a co-ordinated bacteriological service has been developed and maintained by the Department of Health for Scotland on a regional basis, with the professors of bacteriology in the Scottish medical schools as directors of the service in their areas. For the provision of a pathological service at the hospitals run by the Department itself under the Emergency Hospital Scheme, pathologists from the teaching schools were retained on a consultant basis.

3. As a result of these war-time developments, an increasing number of clinicians and pathologists have had practical experience of the value of teamwork in the laboratory, in hospital wards and clinics, in the medical services outside hospitals and in field investigations. The need for collaboration is becoming generally recognized and must receive full expression in the training

* Professor H. R. Dean, Professor of Pathology, University of Cambridge.

provided for medical students; so that when later they become medical practitioners they may be able to use effectively all the aids that pathology has to offer. Such divergence of opinion as exists among clinicians and pathologists relates to the practical means by which collaboration is to be maintained. We refer to these differences of opinion when considering clinical pathology.

4. One other trend must be noted. The great advances that have been made in pathology have inevitably been accompanied by a high degree of internal specialization. Bacteriology, morbid anatomy and clinical pathology have been recognized for many years as independent subjects; chemical pathology is now rapidly developing along its own lines. Such internal specialization is inevitable; but for the effectiveness of current activities and for the sake of future progress, safeguards are needed to prevent the main sections from becoming self-contained, watertight compartments. In some teaching centres the relations between the sections have been far from satisfactory. For example, in some cases, the department of bacteriology has been administratively independent of the department of morbid anatomy. The two departments have been housed in different buildings, and to a large extent their work and teaching have been carried on independently. In one university medical school, up to the year 1943, morbid anatomy was taught under the direction of the professor of pathology in the university department of pathology, and bacteriology by the professor of bacteriology in the bacteriological department of the city laboratories. Although the latter department was closely associated with the city's public health department, the infectious diseases hospitals and the laboratories of the city analyst, it had no direct association with the department of pathology or with the pathology departments of the main teaching hospitals. This example illustrates the dangers that exist and that should be guarded against by appropriate administrative means.

5. The organization of the sections of pathology as well as the relations of pathologists to the work of clinicians must give expression to the fact that morbid anatomy, bacteriology, chemical pathology, clinical pathology, though individually important, are all branches of pathology, which in turn is a branch of Medicine.

ORGANIZATION OF A DIVISION OF PATHOLOGY IN A TEACHING CENTRE.

6. We have come to the conclusion that in every teaching centre there should be a division of pathology made up of the following four departments:—morbid anatomy, bacteriology (including parasitology), chemical pathology and clinical pathology. The establishment of a department of experimental pathology has also been advocated, but in our opinion the better course is to encourage the application of the experimental method in each of the four departments named above. Each of these departments should have a whole-time professor, reader, or senior lecturer at its head, and adequate assistant staff.

7. At the head of the division of pathology, there should be a director, the departmental head most suited to administrative work filling this role. He should be responsible, in collaboration with the other departmental heads, for the general organization of teaching throughout the division, and for seeing that this teaching is linked with that in other branches of Medicine. Subject to the responsibility of the director, each of the departments should have a normal degree of academic independence and be responsible for its own departmental budget. The director of the division should also be in general charge of the arrangements for the pathological investigations carried out on all

patients attended in the parent teaching hospital and also, wherever practicable, in other constituent hospitals of the teaching centre. The placing of academic and hospital work in pathology under unified direction is mutually advantageous. Academic departments are severely handicapped if, as is the case at some medical schools, they are divorced from clinical problems. Conversely the staffs of hospital laboratories are stimulated by day-to-day contacts with their academic colleagues.

8. In recent years there has been a tendency for special clinical departments to appoint their own pathologists, who work apart from the main pathological laboratories. For example, the staffs of some neuro-surgical departments have included neuro-pathologists. These specialist pathologists work in their own laboratories attached to the department of neuro-surgery. Certain disadvantages arise from such isolation of specialist pathologists. While recognizing the importance of clinicians having full opportunities to develop pathological aspects of their work within their own departments, we consider that it is desirable that pathologists attached to special departments should be members of the staff of the division of pathology, maintaining as much contact as possible with the work of the division as a whole and making available their material and records for general pathological teaching and research.

9. Some medical schools and their teaching hospitals have already organized a division of pathology on the lines suggested in paragraph 6 above and the arrangements have worked smoothly and satisfactorily. In the light of the experience that has been gained in these schools and hospitals we proceed to consider the functions of the four departments that, in our opinion, should constitute a division of pathology in a teaching centre. In doing so, we wish to emphasize that quite wide variations within the general scheme may be desirable on account of local differences in staffs and circumstances.

Functions of the four departments.

(a) Department of morbid anatomy.

10. In addition to being responsible for teaching morbid anatomy, this department should be responsible for conducting the post-mortem examinations of the hospitals of the teaching centre and also the histological investigation of tissues from the hospital wards and operating theatres. It should not be the general practice for post-mortem examinations to be carried out by members of the clinical staff.

11. Before the war wide variations existed in the various teaching centres in the number of post-mortem examinations carried out on patients who had died in hospital. In the English provinces and Wales, the percentages ranged from 30.4 to 88. In London the range was from 38 per cent. to 90.5 per cent., all but two of the hospitals having percentages of over 60. In Scotland all the percentages were at a much lower level, the range being from 23 to 46.2.

12. Since two hospitals in London and one in the provinces can reach a percentage of 90, it is clear that there is no insuperable objection to post-mortem examinations from the relatives of the patients. Provided that the reasons are explained to them, they rarely refuse consent to a measure, the purpose of which is the advancement of medical knowledge.

13. Routine necropsies are essential for the work of a medical school with its fully equipped department of pathology. They provide the latter with material of high value for research into and statistical surveys of the causes of illness, because it is derived from cases that have been fully studied during life. They not infrequently reveal new facts that alter profoundly such view of the illness as was formed during life, and thus correct clinical judgements. They may enable a student to mark the processes of a disease that he has been

learning to trace through examination of the living patient. Such necropsies give to him the bedrock of his knowledge.

14. In many areas the existing arrangements for post-mortem examinations on cases which are the subject of inquiry by a coroner in England and Wales or a procurator fiscal in Scotland tend to interfere with the conduct of medical teaching and research. We have considered ourselves entitled to deal with this question in view of the importance of post-mortem investigations in the activities of medical schools. For several years coroners in England and Wales have been adding to the list of cases that have to be reported to them. The list now includes, in addition to police cases, all cases of septicaemia from external injuries, almost all cases of industrial disease and diseases due to want, neglect, or exposure, deaths under anaesthetics and from post-operative shock, unexplained deaths after blood transfusion, deaths from complications arising from the use of certain drugs, and all cases of patients who die within twenty-four hours of admission to hospital. Many of the cases on which post-mortem examinations are most valuable in the furtherance of medical knowledge are covered by this list. If, in any case reported to a coroner, a post-mortem examination is ordered, it has to be performed by an approved pathologist. Coroners often approve a pathologist of a teaching hospital for this purpose, but sometimes, even in areas immediately surrounding such a hospital, they have approved outside pathologists who usually carry out the post-mortem examinations away from the hospital. The coroner decides whether the post-mortem examination can be performed at the hospital where the patient dies by a pathologist of that hospital, or whether it must be conducted away from the hospital by an outside pathologist. In the latter event the post-mortem will usually be lost for the purpose of teaching and research.

15. Because of the value of post-mortem examinations in teaching and research, we strongly support the view that coroners should allow all necropsies on patients who die in a teaching hospital to be performed in that hospital. Normally these necropsies should be performed by a member of the staff of the department of morbid anatomy. In any case in which the coroner considers that the post-mortem examination must be performed by a pathologist not associated with the hospital, a pathologist of the hospital should be entitled to attend, and, after the coroner's pathologist has completed his own examination, to obtain material from the case and make any investigations for the purpose of research.

(b) Departments of bacteriology and chemical pathology.

16. Teaching and research work will constitute a large part of the activities of these two departments; but, in addition, they should be responsible for the more elaborate bacteriological and chemical investigations required by the teaching hospitals. While not responsible for the routine investigations of these hospitals, this work being undertaken by the department of clinical pathology, they should have access to such work and to the material involved.

17. The routine public health bacteriological work for the surrounding area should not be performed by the department of bacteriology. If it were, there would be a serious danger of the staff becoming over-burdened with routine investigations to the detriment of their teaching and research work. Public health bacteriology should be the responsibility of a separate service which is not an integral part of the organization of the teaching centre. It would, however, be advantageous if the main laboratories of this service were housed in the various teaching centres, preferably in the same building as the department of bacteriology of the centre, and if close relations were maintained by the respective staffs. The public health bacteriological laboratory would conduct the routine work for the area. When necessary it would

sent out teams for "field work"; it would provide consultant services for the area, and would serve as a place in which bacteriologists could obtain experience in public health methods.

(c) **Department of clinical pathology.**

18. Broadly speaking pathologists are divided into two groups in their view on the need for a department of clinical pathology. One group, which includes almost all the pathologists in Scotland, is not convinced that clinical pathology should be regarded as a separate section of pathology and is sceptical of the value of clinical pathologists in furthering team-work between clinicians and pathologists. The independent place of clinical pathology is generally recognized by the other group.

19. After careful consideration of the divergent views, we have come to the conclusion that the establishment in every teaching centre of a department of clinical pathology, of a status equal to that of the other departments of the division of pathology, is the best means of facilitating collaboration between the clinicians and the pathological departments in the work of the hospitals of the teaching centre and in the training of undergraduate students. It is equally desirable for the purpose of providing adequately for the training of pathologists to staff the clinical pathological laboratory service of the country and for the maintenance of a high standard of work in that service. Our view has naturally been influenced by the knowledge that, in those centres where such departments have been established, they have proved of great value in all aspects of the teaching and hospital work of the centre and the arrangements have worked smoothly.

20. It is often assumed that a clinical pathologist is a man who, having a particular interest in and considerable knowledge of clinical medicine, specializes in the branch of pathology that is concerned only with diagnosis and treatment. This definition does scant justice to the distinguished academic work carried out in many departments of clinical pathology, especially in haematology. The rapidly expanding subject of haematology can no longer be adequately taught or practised as a side line in the department of morbid anatomy or bacteriology; it falls most appropriately into the department of clinical pathology. We would emphasize that the department will lose its value in a teaching centre if it is regarded as merely a diagnostic laboratory. Clinical pathology has its own research problems, many of them of an academic nature, and facilities must be given to its staff for independent investigation and research on the same level as to the other departments of the division.

21. All requests from members of the clinical staff for pathological examinations, histological examinations excepted, should come, in the first instance, to the department of clinical pathology. Although he will usually have some particular specialist interest, for example, haematology or cytology, the head of the department should be capable of carrying out all ordinary investigations in his own laboratory, thus relieving the other departments of the division of pathology of the burden of routine hospital work. These other departments should be under an obligation to give the department of clinical pathology any special help it may require in their particular branches, for example, in the typing of streptococci, or in particularly difficult investigations. All specimens coming to the department of clinical pathology should be available to the staffs of the other departments with whom the clinical pathologists should work in consultation, seeking their advice and help whenever necessary.

22. There is probably no objection to an alternative arrangement already in operation in certain schools, whereby, having passed through the clinical laboratory for purposes of sorting, routine specimens are sent to the appropriate departments for investigation, leaving the clinical pathologist to cover

haematology and cytology only. But the interests of patients are likely to be best served by a department of clinical pathology working on the lines described at the beginning of the preceding paragraph. Where such a department does not exist, a proper pathological investigation may often involve a patient in examination by two or three departments. Specimens are split up among various departments which examine and report on them more or less independently. From the point of view of the physicians and surgeons, it is advantageous to have, in the person of the clinical pathologist, a colleague who can act as a helpful liaison officer, bringing to bear upon their immediate clinical problems the knowledge that the various specialist sections of pathology can contribute.

TRAINING OF UNDERGRADUATE STUDENTS IN PATHOLOGY.

23. A general medical practitioner should understand the pathological basis of disordered function and how pathological investigations are an aid to diagnosis and treatment. A medical student should therefore acquire a sound knowledge of the fundamental principles of pathology. He should be taught how to obtain specimens and to submit them to the trained pathologists. He should know the types of cases in which the help of a trained pathologist should be sought. He must learn why certain investigations are indicated in certain types of cases, and how to interpret the results; but, except in the case of the common tests, it is impossible as well as unnecessary for him to learn the details of technical procedure.

24. The teaching should be related as far as possible to the rest of the curriculum: in the past it has tended to become too theoretical and divorced from the students' other work. The initiation should be an introductory course of lectures and practical work on the basic principles of the various sections of pathology, including such subjects as inflammation, tumour formation, immunity, metabolic diseases. This course should be followed throughout the remainder of the clinical period by systematic lectures and lecture demonstrations by the staff of the various pathological departments, together with co-operative teaching by pathologists and clinicians. The introductory course might appropriately form part of the introductory clinical course described in chapter 9. The proposal that the rest of the training should be spread throughout the clinical period does not imply any increase in the time devoted to the subject in the undergraduate course. The intention is to secure a spacing of the teaching so that it is interwoven with clinical instruction, instead of being relegated to a short period of intensive study. "The student is best able to appreciate the value of certain aspects of pathological knowledge when he has acquired a certain amount of clinical experience, just as a certain amount of pathological instruction is an asset to the student who is acquiring clinical experience"*.

25. As an example of what we have in mind we may cite the example of tuberculosis, which presents problems in pathology, clinical medicine and social and preventive medicine. The same is true of diphtheria, typhoid, and many other infectious diseases. We should like to see an attempt made to give the student consecutive and planned teaching on such subjects by the specialists concerned, instead of the various aspects being covered, as at present, in a series of completely disconnected courses.

26. If pathology is to take its proper place in undergraduate medical education it is essential that students should see day-to-day collaboration between clinicians and pathologists at the bedside, in the out-patient departments and

* Memorandum of evidence from the Committee of the Pathological Society of Great Britain and Ireland.

in the laboratories. While holding their various clinical appointments, students should receive every encouragement to visit the routine pathological laboratories, there to study material under supervision and to carry out simple routine investigations in respect of patients on whom they are acting as medical clerks or surgical dressers. Given such collaboration, there should be no difficulty in arranging suitable co-operative teaching by clinicians and pathologists, including clinical pathological conferences held at regular intervals, post-mortem room demonstrations and ward demonstrations. Pathology can be taught in the wards, just as medicine and surgery can be taught in the laboratory and post-mortem room.

27. During their period of clerking in the division of pathology, students must do some routine examinations as part of their training; but they should not be used as substitutes for an adequate number of trained laboratory assistants (as has sometimes been the case) and, as a result, be overburdened with routine work.

Chapter 9.

GENERAL CLINICAL INSTRUCTION.

1. In the first chapter we stated that one of the principles to be applied to the organization of undergraduate medical education was that throughout the course the essential unity of Medicine should be observed and the teaching in the various stages and subjects so organized that the whole should become a smooth and logical development. We pointed out that this principle had not been fully observed and that the relationship of the basic sciences to clinical training had often become obscured, while the latter had tended to consist of instruction in what might seem to the student to be a series of isolated subjects. We now consider these matters rather more fully. First, we deal with the question of effecting a smooth transition from pre-clinical to clinical studies by means of an introductory clinical course. Next, we review the problems created in medical education by the growth of specialization and the means whereby the various parts of clinical training may be so correlated that students, while enjoying a sufficiently comprehensive range of clinical experience, obtain an intelligent understanding of Medicine as a whole.

INTRODUCTORY CLINICAL COURSE.

2. The transition from pre-clinical to clinical studies is found by most students to be a difficult and almost disheartening experience. The evidence we have received from representative student bodies and from other sources shows clearly the existence at this stage of the undergraduate medical course of a serious defect. Although attempts at its rectification have been made by several of the medical schools, generally it still exists.

3. Naturally, students are eager for work in hospital as the arena where they long to be and in which they can put to some use the knowledge they have acquired in their pre-clinical years. Under existing conditions, most of them, to their dismay, find themselves in a confusing welter of experiences during the early part of their clinical training. In the pre-clinical period students study established sciences which have a logical development of thought that can readily be taught in a planned series of chosen experiences; and they are concerned primarily with the principles of the normal structure and functions of the human body. In the clinical period they have to build upon their knowledge of the normal a knowledge of the principles governing the derangements of structure and function. They have to do so in an atmosphere very different from that in which they have previously worked.

Living patients are met under novel and more difficult conditions. In the hospital wards various forms of disease are seen in a haphazard and unordered way and students have to try to diagnose and understand each of these forms in all stages of development. Frequently they are expected to do so at a time when they do not even know how to interrogate a patient or elicit the fundamental signs of diseased states in the human body and before they have had instruction in the progress of such pathological changes as may have led to the particular stage of the maladies they are witnessing.

4. Students say that for months they feel befogged and even unhappy in the new environment. That means for all a loss of time. A worse result is that some emerge from the experience with an inclination to discard all the seemingly useless ways of scientific thought and to rely solely upon what they may pick up of the empirical art of Medicine. Persons moving along that road will fail to understand and use aright the fresh discoveries of Medicine after they have entered into independent practice.

5. The older method of assisting the student to overcome these difficulties was to arrange for him to make innumerable earlier crossings, either in apprenticeship to a doctor or in the French way of sending him to hospital rounds from the beginning of his pre-clinical studies. This method is wasteful of the student's time. It is the time of the clinical teachers that must be given instead, as is done in the departments of anatomy and physiology.

6. The work of students must be facilitated by a methodical organization, so that at the beginning of their clinical studies they may see diseased conditions in an orderly development of experience and not in the random ways of routine hospital duties. The aim must be fourfold:—first, to help students in their adjustments to new conditions of work and study; second, to show them the relation to clinical studies of their previous study of the structure of the human body and its functioning in health; third, to encourage them to carry into clinical work the methods of scientific thought and criticism that they have been taught in the pre-clinical departments; and fourth, to assist them to acquire, without loss of time, the ability to observe and interpret physical signs of disease.

7. The introductory clinical course should consist of planned scientific instruction extending over not less than four months. Concurrently with an introduction to the basic principles of the various branches of pathology, the student should be shown and taught to recognize the related phenomena as seen in clinical medicine and surgery. Accuracy in recognizing the physical signs of disease is fundamental to this training, and with it would be associated practice in the use, not only of the stethoscope, but also of the ophthalmoscope, laryngoscope and otoscope, and such other instruments as a practitioner must use if he is to be in possession of the facts upon which diagnosis and treatment can be based. At this stage, diagnosis of the so-called clinical entities must not be stressed. General pathological states should be shown and their signs and symptoms identified on the living patient (for example, in a series of cases of anaemia, or dropsy, or paralysis, or abnormal joints), without a too detailed analysis of the cause in each patient. Heart failure in all its stages could be viewed, and the effects throughout the body of failure of renal function might be similarly surveyed. All these clinical experiences should, so far as possible, be explained in terms of disturbed function or structure or both and the student thus have his mind secured in the habit of scientific thought.

8. In the final phase of the introductory course, each student might be allotted a few selected medical and surgical in-patients, such as offer an easy transition from anatomy and physiology to clinical work, and be made responsible for examining them and recording his findings.

9. On completing a course of the nature outlined a student could pass on with confidence and understanding to the closer clinical work of clerking or dressing in the hospital.

10. An introductory clinical course such as has been described demands from those in charge of it an aggregate of time that could not be asked from men largely engaged in consulting practice. It will require the collection and preliminary study of a series of patients to illustrate each special aspect of disease presented in logical sequence for study. All the beds in the parent teaching hospital must be available as a source of supply for the needed cases, irrespective of the physician or surgeon in whose charge they may be. When the parent teaching hospital cannot meet the need fully, arrangements will have to be made to draw on the resources of other hospitals in the teaching centre. A sharp division need not be made between medical and surgical cases and cases in special departments. The distinction exists only for convenience of treatment; it does not apply in the study of the processes of disease. The organization and general direction of the course should be the special responsibility of the whole-time professors, or equivalent heads, of the divisions of general medicine and surgery, and the director of the division of pathology. For the associated demonstrations to small groups of students it will be necessary to have an adequate number of whole-time assistants (or registrars) whose relative juniority should enable them to remember their own difficulties at the beginning of clinical work, and to see how they should be surmounted.

SPECIALIZATION IN MEDICINE.

The growth of specialization.

11. The evolution of medical knowledge and practice has led inevitably to the growth of the specialist who practises exclusively in one particular branch, or, more usually nowadays in a particular sub-branch of Medicine. For some considerable time certain branches of medicine and surgery have been separated from the body of general medicine and general surgery, and have become the sphere of men practising them exclusively. Diseases of the eyes, skin diseases, and diseases of the ears, nose and throat are examples of these long-established special branches. More recently, other parts of medicine and surgery have tended to become the preserve of specialists. Neurology, cardiology, diseases of the chest, urogenital surgery, thoracic surgery, neurosurgery, orthopaedic surgery and plastic surgery are outstanding instances. The tendency has been most pronounced in surgery, but there seems no doubt that specialization will continue to spread not only in the realm of the surgeon but also in the realm of the physician.

12. Specialization aids, and at the same time is rendered necessary by, the growth of knowledge. During the last 150 years the discovery of new knowledge in Medicine has proceeded at an ever-increasing rate and, with the development of new methods of exploration, progress during the present century has been phenomenal and revolutionary, and is continuing apace. Specialization can increase practical skill; it facilitates more exact diagnosis of difficult cases and assists treatment, particularly when a complicated technique is demanded: but it is not always beneficial; for example, the sharp division that has developed between curative and preventive medicine is detrimental to both. Moreover, specialization has its dangers. These dangers arise if a speciality becomes too far removed from the general body of medical knowledge and from the other special branches. Those practising it may lose their perspective. Progress in the subject may be arrested owing to the loss of useful and stimulating ideas developed in other specialities.

It is through specialization, accompanied by the maintenance of proper contacts with other branches, that progress lies both in the care of patients and in the extension of knowledge. As a result, team-work is becoming increasingly necessary and beneficial.

Educational problems created by specialization.

13. The arrangements for training undergraduate medical students must be adapted to meet the conditions resulting from the extension of specialization. The medical student needs a coherently unified knowledge of Medicine. He has to learn to approach all patients with an open mind and to look upon every patient in the first instance as a functional whole and not in relation to one system. He has to acquire his knowledge and his habits of thought and practice in an atmosphere of specialization, and from teachers who, to an increasing extent, will be specialists. How best to effect the necessary adaptation in the training arrangements is a pressing problem facing every medical school.

14. It has been the custom in Great Britain to organize the clinical training of medical students on the basis of independent clinical units, called in some hospitals a "firm" and in Scottish hospitals a clinic. Such a unit consists of one or two physicians or surgeons on the hospital staff, an assistant (usually called a registrar), one or more house-officers, and a small group of students, acting as "medical clerks" if the unit is a medical one and as "surgical dressers" if it is a surgical one. In accordance with the recommendations of the General Medical Council, the examination regulations of the various licensing bodies require that every student shall act as a medical clerk and as a surgical dresser in the wards of a hospital for six months in each capacity. Each clinical unit looks after a group of beds in the hospital, takes a share in the emergency work and is responsible in many cases for the out-patient service at certain times of the week. Broadly speaking, each unit is an independent entity. The clinicians and the assistants are responsible for, and largely determine the nature of, the clinical instruction that students receive when attached to the unit, such instruction and the clinical experience that students gain being based upon the patients that are dealt with by the unit.

15. With few exceptions the clinicians in the various units, other than the assistants (or registrars) and house-officers, have been consultants and specialists engaged mainly in private practice. The exceptions are at the relatively few schools which have adopted the professorial unit system. This system has been described in chapter 4. It is sufficient for our present purpose to note (i) that a professorial unit is a clinical unit with a whole-time professor at its head and more whole-time assistants than the other units; (ii) that, so far as clinical work and the clinical training of students are concerned, a professorial unit runs parallel with the other units and the professor has no authority with regard to the teaching in those other units.

16. The creation of special departments, and the growing custom for "general" physicians and surgeons to develop a special interest though not practising it exclusively, has had important influences on the training that students receive through attachment to clinical units. Beds and patients of certain types are transferred from "general" units to special departments, with a reduction in the number of beds and in the range and variety of cases dealt with by "general" units both in the wards and out-patient departments. To compensate them for not having seen patients of these types when attached to the general units, students have to be passed through a succession of special departments in a limited period of time. There are disadvantages from the teaching point of view in students entering departments

with the knowledge that patients suffering from a particular disorder are segregated there, and it may lead to the students gaining false impressions. Further, unless the teaching in these departments is carefully related to other parts of his training the student may neglect to pay proper attention to them or may obtain a distorted view of them, because he fails to realize their relation to the rest of his clinical studies. There is not any reason why the teaching in these special departments should, as is often the case, be conducted more or less in isolation from the rest of the training. There is a considerable basic overlap between their work and general medicine and surgery. Machinery, however, is necessary to ensure an adequate correlation of the teaching. Such machinery can also serve to keep the staffs of the special departments in touch with their colleagues in other branches.

17. The educational problem presented by specialization does not end with the special departments. The tendency for "general" physicians and surgeons to develop special interests has resulted in the patients dealt with by any particular clinical unit becoming increasingly of the type in which the clinicians of the unit are specially interested. Students attached to a medical unit that admits to its beds a large proportion of patients suffering from, say, gastric ulcer, may obtain excellent experience of this type of disorder, but their clinical experience generally is likely to be unbalanced. They will not have come into contact with a good cross-section of Medicine. It is such a lack of balance in clinical experience, together with absence of sufficient contact with various types of cases most frequently met in general practice, that constitutes one of the more serious defects in the present day training of medical students. This defect can be partly remedied by bringing into association with the medical school enough hospitals and institutions of various types to secure the range and variety of cases necessary for teaching purposes. The arrangements that we have proposed to this end have been discussed in chapter 3. But such provision alone will not ensure that every student receives a properly balanced clinical training. Arrangements must be made to secure that each student has the opportunity of benefiting from the whole range of facilities that are available. A deliberate planning of the curriculum and the organization of teachers on lines conducive to a welding of all parts of the training into a comprehensible whole are necessary. Though designed primarily in the interests of undergraduate students, an organization fostering co-operation between the staffs in all branches will contribute to the well-being of patients and to the furtherance of research.

18. The London Hospital Medical College suggested as a possible solution to the difficulties an arrangement based on that made in the neurological department established at the London Hospital before the war. The suggestion was as follows:—

"(a) All 'firms' should consist of two physicians or two surgeons.

(b) Senior physicians and surgeons on 'firms' should be encouraged, and junior physicians and surgeons should be required, to continue the ordinary routine and full duty work of a 'firm.' (c) Special departments should be formed by a liaison between two physicians or surgeons with the same special interest on two separate 'firms' who each take the normal share of the general work of their own 'firms,' admit to their beds mainly cases in which they are particularly interested, share a registrar, and together become responsible for a special out-patient clinic in their particular branch of medicine. (d) Under this scheme students on a 'firm' come under one specialist and one general physician or surgeon, or under two specialists in two different branches of medicine, one of whom at least attends to and takes an interest in general medicine or surgery and carries out the routine full duty work of the 'firm.' (e) All students at a later stage attend the out-patient clinics of all the special departments.

If this method is adopted, the organization and nature of the departments are likely to change with changes on the staff. This is the right principle. When a man of unusual ability and originality appears, another member of the staff with a similar interest should be encouraged to work with him, and the necessary department provided for them. The department should be adapted to the men rather than the men to the existing department. Their wishes and methods should receive particular consideration. Our cardiac physicians see cardiac patients only and are of opinion that their subject is best served by having a department with beds to which only cardiac patients are admitted. A certain number of cardiac patients are also admitted to general "firms" and are sent to general out-patient departments. Students, therefore, see a certain number of cardiac cases in the general out-patient department and in the general wards, and the cardiac beds are linked for purposes of clerking to one of the general medical "firms". All students in their final year attend in the cardiac out-patient department. . . . "

19. While agreeing that some such arrangements as those suggested by the London Hospital Medical College would probably lessen some of the prevailing difficulties, we do not consider that they will provide a complete solution.

20. We recommend action on the following lines:—

(a) In the training of specialists a sound post-graduate experience of general medicine and surgery should be a prelude to specialization. The evidence we have received discloses widespread and authoritative support for this view. If acted upon it would increase the likelihood of all clinical teachers in future, whatever their speciality, viewing that speciality, both in practice and teaching, in its true relation to Medicine as a whole.

(b) For the purposes of medical education, the department of general medicine should be linked with the various medical special departments to form a division of medicine. Similarly, the departments concerned with general and special surgery should constitute a division of surgery. These divisions would be parallel to divisions of pre-clinical studies, of pathology, and of obstetrics and gynaecology. In general form, the divisions of medicine and of surgery would be the same. We need, therefore, describe the salient features of only one of these divisions and for convenience select the former.

(c) The division of medicine would consist of the departments of general medicine, of child health, of psychiatry, of social medicine and of other departments concerned with medical specialities. In the case of some departments which deal with medicine and surgery, their allocation to either the division of medicine or to that of surgery might have to be made more or less arbitrarily. In certain cases (for instance in the case of the department of social medicine) the department would be associated with more than one division. A divisional organization for training purposes need not prevent the establishment in suitable cases of departments or units, which are staffed by both physicians and surgeons.

(d) Each of the departments should have a whole- or part-time academic head responsible for the organization and general direction of teaching and research carried out by his department in the various institutions and services constituting the teaching centre. In performing these functions he should work in the closest collaboration with his colleagues in the department and it would be in accord with academic practice if, in the case of large departments, he were assisted by a committee or board of studies appointed by the teachers in the department. But though so assisted, his responsibility for the educational direction of the department should be a personal one. Experience in the academic world and outside shows that greater efficiency is likely to be attained thereby.

(e) The whole division of medicine should also have an academic head. Normally the professor or equivalent head of the department of general medicine would occupy this position. His responsibility also should be a personal one, though exercised in co-operation with the academic heads of the departments of the division through some appropriate machinery. He should see that all the teaching resources of the departments in the division are used and related in the interests of medical students.

(f) The main administrative responsibility for ensuring that the training provided by the divisions concerned with clinical studies is properly correlated should rest with the dean of the school and the academic heads of the divisions of medicine, surgery, obstetrics and gynaecology, and pathology. We wish to emphasize that this proposal is not intended to grant autocratic powers to this group of officers of the school. Correlation of teaching would be within the general framework of the educational policy of the school, such policy being determined by the appropriate bodies of the university or by the school council as the case might be. Further, the departmental heads would be entitled to the same privileges of access to those bodies as are normally enjoyed by those at the head of academic departments.

(g) The clinical work of the teaching hospitals and the clinical training of students would continue to be conducted on the basis of clinical units. The clinicians in charge of these units would have the same unfettered responsibility for the care and treatment of their patients as they possess in voluntary teaching hospitals at the present time. With regard, however, to the training of students, they would have rather less independence than they have under existing conditions. They would be subject to the educational direction of the academic heads and would be under an obligation to make the instruction they give to students conform to such general scheme of training as may be prepared with a view to providing students with a comprehensive knowledge of general principles and a range of clinical experience fitted to their future professional needs. The aim is to secure a unified system of medical education based on student needs and on the resources of all departments, without encroaching on the personal responsibility of clinicians for the care and treatment of their patients. Retention of such responsibility we regard as of prime importance. We cannot see that members of the staff of a teaching hospital can have any solid ground for objecting to their work as teachers being subjected to the measure of organization and direction which is proposed, and which has long been accepted, without question, by teachers in all other faculties of the universities.

(h) The organization of teaching is likely to be assisted by two other means, which are simple to arrange and which have been tried with success in some medical educational institutions. The first is to hold periodic, informal meetings of all teachers, at which the sole subject of discussion is the content of teaching within the various departments and the correlation of teaching between departments. The second is to obtain, regularly, the views of students regarding existing deficiencies and desirable improvements.

21. As with any organization, success will be dependent to a large extent upon the abilities and personalities of the deans and the academic heads of the divisions and departments. Clearly these persons must be capable of winning the co-operation of their colleagues. The total amount of time that any of the academic heads of the divisions would be required to devote in the course of a year to the work of general organization and direction should not be large; but in order that they may be able to give sufficient time and thought to it and have enough time for their other duties, they should be whole-time officers of the medical school, and be provided with adequate assistance for the

performance of their various duties. Some time may elapse before a sufficient number of persons is available for such whole-time appointments. It is to be expected that, as a rule, a person of wide experience and of established senior status would be most suitable.

THEORETICAL INSTRUCTION.

22. Sir Thomas Lewis and University College Hospital Medical School, believing that Medicine can no longer be taught entirely as a practical art, submitted in evidence a stimulating plea for improved provision for teaching the theory of Medicine. It was argued that the introduction of more theoretical teaching is required for two practical purposes, namely, to stimulate progressive work, and to promote more thoughtful practice.

23. The kernel of the proposal is that, circumspectly, there should be diffused throughout the whole of the clinical part of the course special teaching displaying the theoretical basis of clinical medicine. This teaching, it was suggested, should be given by persons predominantly, but not exclusively, devoting full-time study to this subject. "It should include theories of disease, both hereditary and acquired. It should clarify in students' minds what is meant by disease, and concern itself intimately with the cause of disease. It should use the history of medicine from the special standpoint of studying methods of discovery, relating step by step the manner in which important discoveries, and, particularly, recent discoveries, have been made; this not only for its general educational value but as a stimulus to new endeavour. It should keep close contact with work in the ancillary sciences and especially with physiology. It should explore the meaning of manifestations of disease, seeking the reason why the same manifestation occurs in different sets of circumstances, and analysing such manifestations in terms of disturbed function. Thus the teacher should be strongly backed by direct and indirect experiences of research. In respect of diagnosis, prognosis, and treatment, this teaching should concern itself mainly with principles, with evidence and criticism on broad lines, and with selected illustration only". It was claimed that such teaching would have a profound effect on the more thoughtful type of student and would produce benefits by leavening the whole body of teachers and students.

24. Although much impressed by the suggestion thus put before us, we do not feel able to submit recommendations for its general adoption in its entirety. Partial expression is given to the underlying idea in our proposals for the introductory clinical course.

25. We consider, however, that the suggestion is one that warrants serious study by the medical schools with a view to deciding whether experiments can be tried, and, if so, in what manner. As University College Hospital Medical School pointed out, it may be found, either by preliminary consideration or ultimately by trial, that the need can be fulfilled in different ways, suited to differing local conditions and "it is very probable that in the initial phases some experimentation in method may be required, in which various methods are tried and their results compared, in an effort to reach the desired goal". We append [Appendix O] the relevant extracts from the memorandum of evidence from University College Hospital Medical School and although not submitting recommendations relating directly thereto, we commend them to the consideration of all concerned with medical education.

OUT-PATIENT TEACHING AND ITS RELATION TO WARD TEACHING.

26. The out-patient departments of teaching hospitals cater at the present time for three classes of patients, namely, those who are referred to the

* From memorandum submitted by University College Hospital Medical School.

hospital by their own doctors, those who are brought there on account of injuries caused by accidents, and lastly those who come to the hospital of their own volition instead of going to a general practitioner. In respect of the first group, the work of the out-patient departments is of a consultative nature, a preliminary investigation having as a rule already been made by a general practitioner. The second and third groups, which are numerically large, have not been so investigated, and it is a common practice for patients in these groups to be dealt with in the first instance by the "casualty" out-patient department, where a quick sorting-out has to be done. Some of the patients may disclose vague symptoms making a diagnosis difficult and rendering necessary reference to other out-patient departments or admission to the hospital wards for further investigation. On the other hand many, for example those suffering from trivial injuries, can be given immediate treatment.

27. The value of these out-patient departments in the training of medical students is immense. They provide a wide variety of unselected cases. Most of these cases are of the type that general practitioners meet in their practice, and a considerable proportion of them present special problems to a general practitioner. In many respects they offer a better cross-section of the type of clinical experience that students need than is to be obtained in the hospital wards. Taking surgery as an example, the general surgical out-patient department provides examples of simple injuries which can usefully form part of a student's introduction to surgery, and, in respect of his later clinical instruction, the department furnishes a consultative service on surgical conditions and provides an opportunity for students to perform under supervision the more elementary surgical procedures. In most of the special subjects the out-patient departments provide almost all the clinical experience an undergraduate student requires, the type of cases admitted to the wards of these departments frequently being too advanced for useful study by him.

28. It is generally true, but particularly so of general out-patient departments, that the facilities that these departments offer for the training of students have not been utilized fully and in the best way. The crowded conditions and hurried work of many out-patient departments are most unsatisfactory from all points of view, from the standpoint of the patients, staff and students. In many instances the accommodation is cramped and ill-planned. Most of the departments are understaffed and overworked. Although attempts are being made to meet the problem by arranging for out-patient consultations by appointment, patients all too frequently have to waste an unnecessarily large amount of time just waiting about. For students to see medical work conducted under these conditions cannot but have very bad effects upon their professional outlook and methods of practice. For an improvement in these conditions the outstanding needs are more space and a larger staff engaged in the work.

29. If a student is to derive full value from instruction in the out-patient departments, his experience there must dovetail properly into his experience in the hospital wards; he must have adequate opportunities of following the progress of patients who are admitted to the wards from the out-patient department; and he must see the most mature minds at work on the consultative side of the departments' activities. The most satisfactory way of securing that these requirements are fulfilled is by arranging (i) that all the members of a clinical unit, including the chief clinician, participate in out-patient work and (ii) that the work of the unit in its wards and out-patient departments is closely related, patients admitted to such wards normally being those seen by the unit at its out-patient sessions.

30. In the special departments it is the general rule for the senior members of the staff to take part in the conduct of out-patient departments and in the

teaching of students there; but at a considerable number of teaching hospitals it has become the custom for the senior members of the staff in general medicine, general surgery and (at slightly fewer hospitals) in obstetrics and gynaecology, to leave the out-patient work and teaching to their assistants. By so doing the senior teachers lose the opportunity of participating in one of the most valuable parts of a student's training. The retention of a sharp division between in-patient and out-patient work cannot be justified. From the educational standpoint in particular, they are complementary activities, and should be performed by the same group of persons, working in both as a team.

31. Since it is important that students should receive unhurried and analytical instruction, the number of out-patients a teacher is called upon to deal with at any out-patient session at which he is instructing students should be strictly limited to the number upon whom he can give proper instruction. The staffing arrangements should be such as to permit a limitation of this nature.

CLINICAL-PATHOLOGICAL CONFERENCE.

32. Regular clinical-pathological conferences when individual patients are discussed, first by the clinician and then by members of the pathological staff concerned in the investigations that have been made, have long been a feature in certain British teaching hospitals and are commonly used in the United States of America as a means of bringing the different aspects of a case before students. We think that conferences of this nature should become a regular feature of the life of British teaching hospitals. The scope of these conferences should be as wide as possible. They should not be limited to cases on which post-mortem examinations have been made since they can be equally valuable in respect of living patients. The social and preventive aspects of a case should not be neglected. Those taking part will be determined by the nature of the case and whenever appropriate should include, in addition to the physician or surgeon in charge of the patient and the pathologists concerned, the psychiatrist, the radiologist, the member of the staff concerned with social medicine and the hospital almoner. For such a conference to be successful, considerable preparation is necessary.

CONTINUOUS CLINICAL INSTRUCTION.

33. In the medical schools in England and Wales the clinical training of students is continuous throughout a calendar year. In the schools in Scotland the system is different. There the clinical instruction of students is concentrated in academic terms during which intensive teaching is given. Before the war there were three terms a year, each term being of approximately 10 weeks' duration. In the summer there was a long vacation of about three months, during which students were not required to attend either the medical school or the teaching hospital. Some students, of their own accord, obtained permission to work for part of this vacation in the teaching hospital of their medical school or in another hospital; but many students remained completely out of touch with clinical work during the whole of the long vacation, a proportion taking up paid work (e.g. harvesting) so as to accumulate some money towards meeting their expenses during the next year of their course.

34. Within the last two years, as a means of speeding up the training of students, the system in Scotland has been temporarily modified by the introduction of a fourth term, during the summer vacation. During this fourth term students do not receive formal instruction from the teaching staff of the medical school, but spend their time working in the wards and out-patient departments of the teaching hospitals or of other approved hospitals.

35. In the recommendations* which it has made to the licensing bodies the General Medical Council proposed that the period of clinical studies should occupy the third, fourth and fifth years of the "medical curriculum proper," and that these should be calendar years during which the clinical instruction of students should be *continuous*. In view of this recommendation, we sought, at our interviews with representatives of the Scottish medical schools, to gather information about the system which these schools were likely to favour after the war. From these discussions it appears that a final decision has not been reached, but that a considerable body of opinion is in favour of continuing the war-time arrangement of a fourth term, provided that the amount of teaching work individual teachers are called upon to perform in the course of any year is not thereby increased.

36. We consider that it is undesirable for a medical student, during the clinical part of his training, to be completely out of touch with hospital work for thirteen consecutive weeks each year. We should therefore regard the continuance of the war-time scheme as an improvement on the pre-war system; but we hope that the Scottish medical schools will seriously consider rearranging their curricula on the basis of continuous clinical instruction throughout a calendar year, as advised by the General Medical Council. By so doing the schools should be able to lessen the intensity of the training at any given time, a modification which would be an advantage to both staff and students. It would make it easier for them to arrange their teaching programme on lines that satisfy the principles which we have set forth in the earlier part of our report, and with which they are in general accord. The change would also help students by giving them a longer contact with clinical work during their training.

37. Some of the clinical teachers in the Scottish schools fear that the introduction of either continuous clinical instruction or a fourth term would result in an increase in their teaching duties. The amount of teaching work which they do during the three established terms is very heavy, much heavier than is normally performed by teachers in other medical schools during the same period of time. We agree entirely with them that they should not be expected to do more. Indeed, we think that, in general, there should be some reduction in the amount which each individual is called upon to perform, this reduction being effected by remedying the existing understaffing of departments. Neither of the changes that we have discussed involves any increase in the amount of formal lectures and class teaching, and a staff of the proper size for the intensive system of instruction based on academic terms can conduct training on the continuous system without additions to their number or extra teaching demands on individual members.

38. A further matter has to be noted. It concerns financial assistance to students. Assuming that clinical instruction is made continuous or is spread over four terms a year, the scales of grants to needy students will probably have to be revised. The abolition of the long vacation will increase the annual expenses of most students (for example, if they are living in lodgings or halls of residence or travel some distance from home to the medical school) and will prevent others from supplementing their resources by taking paid jobs during the summer months.

RESIDENCE DURING TRAINING.

39. In compliance with a recommendation of the General Medical Council, almost all the schools have arranged for their students to reside in hospital for two months during their training in obstetrics. In addition some of the schools have arranged for their students to spend short periods of residence in hospital when studying other subjects.

* See chapter 16, paragraphs 12 to 14.

40. "There can be no doubt as to the great professional advantage to a senior student of an intimate participation in the work of the hospital at all hours of the day and night."* In some subjects, for example, infectious diseases, children's diseases, and the diagnosis and treatment of acute "emergencies" and accident cases, a student can gain an adequate practical knowledge of the conditions which he will meet in general practice only if he is resident in hospital and can be present when patients are admitted and before a diagnosis has been made. Otherwise, opportunities for gaining this essential experience will be fortuitous and usually missed.

41. We are of the opinion that students would be better fitted for their future work if arrangements were made for them to reside in the teaching hospitals for a total period of about six months during the clinical part of their training. This period might comprise two months while they are engaged in general medical and surgical work, including the treatment of accidents, two months during their midwifery training, two to four weeks in an infectious diseases hospital and one month in a children's department or hospital. The adoption of this recommendation will necessitate the provision or extension of residential accommodation for students in most of the teaching hospitals.

Chapter 10.

SOME ASPECTS OF THE TRAINING IN MEDICINE AND SURGERY.

1. Various aspects of the training in medicine and surgery are considered in this chapter, particularly from the standpoint of a suitable bias being given to the needs of the family doctor. For convenience of presentation social medicine, child health and psychiatry are the subjects of separate chapters that follow. Because of the developments that are necessary in the training provided in these subjects, they receive rather fuller consideration than the branches in which few changes are required. Throughout the present chapter we assume that teachers and examiners will so adapt the scope and methods of their teaching and of their appraisal of students' knowledge that the main emphasis will be on basic principles and methods, and due regard will be given to the scientific foundation and framework of Medicine. As we have stressed elsewhere, such adaptation is a fundamental and urgent reform. The responsibility for effecting it rests on the teachers and examiners themselves, and upon those who prescribe the medical curriculum and the examination regulations.

2. In the organization and conduct of the course of training, there is a failure, in various respects, to take proper account of the types of problems that most frequently face practitioners in general practice. At the same time undue attention is paid to certain subjects that are out of place in a basic course of training, particularly a basic course that is followed by a compulsory period of house-appointments in hospitals.

GENERAL MEDICINE.

3. If medical students are to be trained most effectively and are to be properly equipped for practice as family doctors, general medicine must form the most important part of their clinical training. Broadly speaking, the systematic physical examination can be better taught in the department of general medicine than in any other and the majority of patients seen by a general practitioner suffer from conditions that are of this character.

* Memorandum from Guy's Hospital Medical School.

4. With these facts in mind, we consider that the introductory clinical course* should be followed by a period of in-patient and out-patient clerking in the department of general medicine, for about four months. During this period stress would be laid on (i) the taking of a complete history of a patient's illness and the study of his social and environmental conditions, (ii) the ordered physical examination of all systems of the body, including the nervous system, done in a systematic manner so as to inculcate a routine which will not be forgotten in the student's later life, (iii) a study of the help which can be given by ancillary examinations such as the pathological and radiological. We have stated these matters in this order because we believe that a student should learn to obtain all the information he can from the history and the physical sign before he calls to his aid other methods of diagnosis. Besides including elementary instruction in neurology, the student's training during this period should embrace the basic teaching in psychiatry and social medicine. At later stages of his training a student will not have such favourable opportunities of acquiring a sound basic knowledge of the principles of psychological medicine and social medicine and if thus early he becomes imbued with these principles, he will automatically apply them throughout the clinical part of the course.

5. In the first half of the final clinical year he should do one month each as senior clerk and surgical dresser with special work in the out-patient and casualty departments as a preparation for the more responsible work which he will undertake when holding pre-registration house appointments. At this stage special attention should be given to treatment.

THE MORE COMMON DISEASES AND THE EARLY STAGES OF DISEASE.

6. Most of a general practitioner's work is concerned with the more common diseases and with the early stages of disease. As a general rule, the clinical experience of students during their training has been seriously deficient in both these respects. Some measure of responsibility for this deficiency rests on the teachers, but incompleteness in the facilities for clinical instruction has been the main cause. Often, under the fascination of the rarer and technically more "interesting" types of case, teachers have not been sufficiently diligent in seeking to base their teaching on clinical experience that will be of most value to students in their subsequent careers. "Interesting" types of cases often illustrate useful principles and cannot, therefore, be altogether ignored by the teacher; but much greater use than has been customary should be made of the commoner types of case. In earlier chapters we have put forward proposals that have as their objective the filling of the gaps in the range and variety of clinical teaching facilities available to medical schools.

CHRONIC DISEASES.

7. A general practitioner is confronted in his practice with many chronic types of disease, such as chronic heart and vascular diseases, chronic bronchial disease, chronic nervous diseases, advanced malignant disease, chronic disease of bones and joints, chronic psycho-neuroses, and the senile state. At the present time patients suffering from these conditions tend to be congregated in the local authority hospitals and special institutions; comparatively few are admitted to the voluntary teaching hospitals. Arrangements have been made by most of the medical schools for students to attend demonstrations on chronic diseases at local authority hospitals, but generally these arrangements do not secure that students obtain adequate experience.

* See chapter 9, paragraphs 2 to 10.

8. We believe that both the well-being of patients and medical knowledge have suffered from the segregation of patients suffering from chronic diseases in institutions unconnected with general hospitals. We are, therefore, in favour of the staffs of general hospitals, including the teaching hospitals, being encouraged to take a greater interest in the problems of chronic disease. With this object in view we support the proposal that every teaching hospital should admit patients with chronic diseases for thorough examination and that, whenever possible, they should provide treatment with a view to the patients' return to a useful life. It is not suggested that these hospitals should provide extensive ward accommodation for these patients or that they should assume responsibility for patients who are permanently bed-ridden.

9. The adoption of this proposal by the teaching hospitals would help to give medical students a better knowledge of chronic types of disease, but it would not secure that they received all the experience that they will need as general practitioners. In addition to symptomatic treatment, problems of diet, nursing and management often arise with chronic cases and a general practitioner may be called upon to advise on the domiciliary care of immobile and bed-ridden patients. Experience in dealing with these problems can be properly learned only by a period of residence in an institution which cares for bed-ridden patients. Probably such experience could best be obtained by a student sometime during the period in which he is holding pre-registration house appointments.

APPLIED PHARMACOLOGY AND THERAPEUTICS.

10. We are living in an era when an increasing number of drugs, with great potentialities for good or evil, are being put into the hands of doctors. These drugs may be ineffective or even dangerous, if used without adequate knowledge of their properties; but when rightly handled they provide the doctor with a most powerful weapon for attacking disease, since many of them are capable of attacking the causes and not merely of mitigating the symptoms. The promise and the dangers inherent in the present position necessitate a considerable improvement in the arrangements for instructing medical students in the fundamental scientific principles applicable to drugs and their use in treatment. In many medical schools this subject still receives cursory attention, and the methods of teaching it have not kept abreast of modern developments.

11. Students must know the circumstances in which various drugs are valuable aids to treatment and the dangers attached to their use. It is equally important that the student should be fully alive to their limitations and the conditions in which they are useless. His knowledge needs to be systematized and to have a scientific basis. It is possible to provide him with a connected and comparative picture, since many drugs have much in common in respect of the problems of their administration, of their absorption and fate in the body, and of the assessment of their therapeutic and toxic effects. Having obtained such a basic scientific view, a practitioner will be aided in his general use of drugs, and, as therapeutics advances and new remedies are discovered, he will be able to make an intelligent selection and use these new agents effectively.

12. The teaching of pharmacology in the pre-clinical period and of applied pharmacology in the clinical period should be in the hands of a pharmacologist with the rank of reader or senior lecturer who should be attached both to the department of physiology and to the division of medicine. A few schools may find it desirable to develop an independent department of pharmacology under a professor. This department may be placed among either the pre-clinical or clinical departments but a close liaison should exist between it and the departments mentioned above.

13. The amount of teaching done in the pre-clinical period should be limited to demonstrating the action of a few well-defined drugs on the normal organism in order to illustrate the scientific approach to the investigation of drug action. The major part of the teaching should be given in the later stages of the clinical period, when the student has obtained a thorough grounding in pathology and clinical medicine. This course should be conducted partly by the pharmacologist and partly by a member of the clinical staff, together with the pharmacist, and should deal with the application of drugs and other therapeutic agents to diseased states.

14. In most medical schools inadequate staffing provision has been made for the proper teaching of pharmacology. The provision we have suggested is the minimum that should be made if the department is adequately to perform its teaching functions, and at the same time carry out investigations into the properties and application of new therapeutic agents.

INFECTIOUS DISEASES.

15. The training on infectious diseases is important, not only because a good knowledge of these diseases, especially in their early stages, is essential for a general practitioner, but also because they offer a fruitful field for the teaching of the general principles of pathology and of preventive and curative medicine. Nevertheless, broadly speaking, the training provided in this subject falls short of what is necessary. In most schools the scope of the training is too limited and the organization on the clinical and laboratory sides calls for material improvement. The greater part, usually the whole, of the practical training is given during weekly visits of short duration to infectious diseases hospitals maintained by local authorities. Students are not required, and seldom have the opportunity, to work in the receiving room of an infectious diseases hospital or to study the progress of individual patients in a fever ward. Few general hospitals maintain such a ward. Patients who develop an acute infectious disease after admission to a general hospital usually have to be transferred to a fever hospital, irrespective of any other medical condition from which they may be suffering.

16. There is general agreement that if a student is to acquire an adequate experience of infectious diseases he must reside for two to four weeks as a clinical clerk in an infectious diseases hospital or block, preferably during those periods of the year in which infectious diseases are most prevalent. While there, he should assist in the receiving room, where he will see patients at the stage at which the general practitioner has had to make decisions about them. We consider that such a period of residence should be made compulsory for every student at the earliest possible date. Before this recommendation can be implemented, residential accommodation for students will have to be provided at many of the infectious diseases hospitals used for the training of students. Financial assistance may be required in meeting the cost of such accommodation. In those areas in which it has to be provided, it should be a charge on the grants for medical education, since its provision is the principal means of effecting the much needed improvement in the training on infectious diseases.

17. The intermittent incidence of fevers may create similar difficulties in arranging for students to reside in infectious diseases hospitals to those which arise under the present arrangements; but we are satisfied that these difficulties are not insurmountable, particularly in the larger of these hospitals, which, for the most part, are those used for training purposes. During the war students from some of the London medical schools have had resident training in infectious diseases hospitals maintained by the London County Council. The arrangements have worked satisfactorily and should work even better when normal conditions are restored. The London County Council has signified

its willingness to extend these arrangements after the war so far as may be practicable, and we have been assured by the various representative bodies of the interest and support of other local authorities in this matter.

18. It will contribute to the efficiency of the teaching if the infectious diseases hospital used for the training of students is regarded as a constituent hospital of the teaching centre and if those members of its staff who are concerned with the training of students are recognized as teachers of the medical school. In London, each of the County Council's fever hospitals that is so used may have to be associated with more than one medical school; but no serious difficulties should arise as a result.

19. The training on infectious diseases would also be improved if an isolation block of reasonable size could be provided either in the parent teaching hospital or close by. There are no medical reasons against having such a block and its advantages would not be confined to medical education. It would serve the interests of patients who contract an infectious disease while being treated in the teaching hospital for some other medical condition. General physicians of the hospital would profit by experience, from time to time, of such cases, and the block would be useful in the training of nurses. It is improbable that in such a block it would be possible to do more than supplement the training received by students in the infectious diseases hospital, but the block would be none the less valuable on that account.

TUBERCULOSIS.

20. None will dispute that medical students should have proper access to cases of tuberculosis, including surgical tuberculosis, so that they may learn how such patients are dealt with, both clinically (with special reference to diagnosis) and in relation to public health. The present facilities vary considerably in teaching centres. Most patients suffering from tuberculosis are sent in the first instance to tuberculosis dispensaries maintained by local authorities. A considerable proportion of the teaching hospitals, by arrangement with their local authorities, have tuberculosis dispensaries attached to them; but there are still some teaching hospitals without such dispensaries. The majority of patients suffering from pulmonary tuberculosis and requiring in-patient treatment are admitted either to special chest hospitals or to the tuberculosis wards of local authority hospitals or direct to sanatoria. Likewise, cases of non-pulmonary tuberculosis are usually admitted to special institutions and are not seen as a routine in general hospitals.

21. The differences that exist in the nature of the instruction given at the various medical schools may be indicated by the following two examples:— At one school the course in tuberculosis is given by a lecturer in tuberculosis who is the tuberculosis officer of the local authority. It consists of ten meetings devoted mainly to lectures, but including a few clinical demonstrations. No bedside teaching on signs of disease is included in the course. The teaching hospital of this medical school has not a tuberculosis department although a certain number of cases of both pulmonary and surgical tuberculosis are admitted to the general wards. The second medical school is associated with a teaching hospital which has a tuberculosis dispensary to which patients are referred by general practitioners, public authorities and the staff of other departments of the hospital. Before the war this school arranged that every three months the officer in charge of the dispensary had eight senior undergraduate students attached to him for instruction. These students wrote down the histories and completed the notes of investigations on all new patients attending the department. They were taught to make use of the various methods of clinical, X-ray and laboratory diagnosis, and, under supervision, learned to maintain artificial pneumothorax treatment on patients attending

for this purpose. The dispensary maintained close co-operation with specialists in other departments of the hospital, especially the laryngologists, the obstetricians and the chest surgeons. The "follow-up" of cases was made in conjunction with the almoner's department.

22. The training indicated in the second example was typical of that provided in a number of schools whose teaching hospitals had tuberculosis dispensaries. We have no doubt that the provision of training on these lines should be the aim. The most likely, probably the only means of securing such provision is the establishment of at least a tuberculosis dispensary at or adjoining every parent teaching hospital. We consider that the attention of the local authorities concerned should be directed to the importance of this matter and that they should be encouraged to modify accordingly their arrangements for dealing with tuberculosis.

23. In-patient facilities for cases of both pulmonary and non-pulmonary tuberculosis should exist in one or more of the hospitals constituting the teaching centre. Such facilities might be in a special hospital or separate block or consist of wards in either the parent teaching hospital or one of the associated teaching hospitals.

DISEASES OF THE SKIN.

24. In general practice and in public health clinics practitioners often have to deal with patients suffering from skin diseases. In most cases the disease can be diagnosed and treated without difficulty, provided that the practitioner has acquired an ordinary measure of competence, such as he would have if the course of training provided by most medical schools at the present time on diseases of the skin were conscientiously attended and were followed by an occasional refresher course. Unfortunately, courses in skin diseases are usually not attended conscientiously by undergraduate students. As a result many general practitioners find difficulty in dealing even with simple skin conditions as shown in the recent widespread epidemic of scabies.

25. Every medical teaching centre must have a department for diseases of the skin. If this department is not in the parent teaching hospital it should be in one of the associated general teaching hospitals of the centre. The department should consist of a reasonable number of beds for the investigation and treatment of in-patients, and an out-patient department with adequate accommodation and number of patients. The major part of the clinical training can be conducted in the out-patient department. This training should be limited to the diagnosis and treatment of common skin diseases, and instruction in the care of the skin, especially with a view to preventing industrial dermatitis. Many general practitioners act also as factory doctors, and the incidence of industrial dermatitis is unnecessarily high. Elementary instruction in the morphology, physiology and pathology of the skin should be given before the student attends the clinics.

VENEREAL DISEASES.

26. In every teaching centre there should be a venereal diseases department. A short course of instruction laying particular stress on the early diagnosis and the principles of treatment of these diseases should be followed by all students.

FORENSIC MEDICINE.

27. In some medical schools the amount of instruction given to medical students on forensic medicine seems excessive having regard to the needs of general practice.

DIAGNOSTIC AND THERAPEUTIC RADIOLOGY.

28. We believe that the practice of diagnostic and therapeutic radiology should be confined to specialists who, as a result of post-graduate training and experience, have acquired the requisite high degree of medical and radiological knowledge and skill. In our view, the knowledge that a general practitioner needs of this subject is strictly limited.

Diagnostic radiology.

29. In diagnosis, the importance of radiology is comparable with that of pathology. Every student should be aware of the ways in which diagnostic radiology may help him in his practice. He should know the X-ray appearances of the lesions commonly encountered in hospital or general practice, and the rationale of, and preparations for, various X-ray investigations. He should be able to understand the reports of radiologists. It is unnecessary for him to know the details of radiological technique, which, like the technique of clinical pathology, is a matter for the specialist.

30. In order that students may absorb this essential knowledge, every parent teaching hospital should have a radiological département that is open to the whole hospital. The staff of this department should participate in the training of students. Students can be introduced to radiology, profitably, by means of radiological demonstrations on the normal individual, given by members of the radiological staff in collaboration with the teachers in anatomy and physiology. The various medical schools should be equipped with appropriate apparatus, which could also be used for research purposes. Some medical schools are already so equipped. In the clinical period, instruction in the use of radiology in diagnosis should be given during the training in medicine and surgery by clinicians in collaboration with radiologists.

Therapeutic radiology.

31. On the therapeutic side of radiology all that a general practitioner needs to know is (i) the conditions for which radiotherapy is of value and its contra-indications, (ii) the implications of the treatment from the patients' point of view (for example, its length, severity, and dangers), (iii) the results that can be obtained, and (iv) the after-care of patients. He does not require more than a broad view free from detail.

32. For the purpose of this instruction, it is advantageous to have a radio-therapeutic department in a teaching centre. Where such a department exists, students can obtain useful knowledge by attending consultative and "follow-up" clinics, which are essential for efficient radiotherapy, between the radio-therapists and specialists in other branches of Medicine.

REHABILITATION.

33. The following extracts from the report, issued in 1942, by the Inter-departmental Committee (the Tomlinson Committee) on the Rehabilitation and Resettlement of Disabled Persons, indicate the position reached in the work of rehabilitation:—"Remédial and occupational therapy have yet to win their full recognition in the medical profession, especially in relation to general surgical and medical cases as distinguished from cases of injury". "The gap between what is needed and the provision to meet the need is wide". "Existing rehabilitation departments have to be brought up to the desired standard and new departments have to be created to permit the longer stay in hospital which the rehabilitation process demands. It is true that the aggregate number of hospital beds has been greatly increased under the Emergency Hospital Scheme and full rehabilitation facilities have been provided at special centres under the scheme, but this does not obviate the

need for extensions at a large number of general hospitals throughout the country if the new service is to be widely and uniformly developed. A very great and sustained effort on a national scale is required if the pioneer work done in relatively few institutions up and down the country is to be extended to meet the actual dimensions of the opportunity and the need." In such circumstances it is not surprising that the training of medical students in the possibilities of rehabilitation has been seriously deficient.

34. Since the publication of the report of the Tomlinson Committee a determined drive has begun in the development of an adequate rehabilitation service. For this effort to be completely successful the teaching hospitals, in view of their strong influence on medical thought and practice, must play a prominent part. We have no doubt that they will do so. Every teaching hospital should have proper facilities for rehabilitative work and should be closely associated, for the treatment of patients and the training of medical students, with special rehabilitation and vocational training centres. As methods of rehabilitation are introduced and improved, medical students should be kept fully informed about them.

SURGERY.

35. The surgical part of the undergraduate course should be closely correlated with other clinical work, and its aim should be to assist in the development of the essential qualities set out in chapter 1, paragraph 5, of this report. It should, therefore, be concerned primarily with the inculcation of general surgical principles.

36. Under the Medical Acts, every registered practitioner is entitled by law to practise surgery, but in the interests of patients the trend of medical custom has been to restrict the practice of major operative surgery to those who have had post-graduate training and experience in this work. We consider that, with the promised development of an adequate hospital service in all parts of the country, the likelihood of any practitioner, other than one so specially trained, being called upon—even in emergency—to undertake major operative surgery is so small that it can be left out of account in framing the training of future general practitioners. We are, therefore, of the opinion that the technical details of operative measures, usually regarded by the layman as the whole content of surgery, are without exception matters for post-graduate study.

37. We believe that the best intellectual approach to the study of surgery is the realization that it is concerned not only (as has been too often thought in the past) with diagnosis and technical dexterity, but also, and much more importantly, with the underlying disturbances of function and structure resulting from the pathological process or accident necessitating surgical intervention, or from the intervention itself.

38. Many forms of surgical disease provide opportunities for implanting these principles, and for developing the students' powers of accurate observation and logical reasoning. Certain simple orthopaedic, neurological and urological conditions provide very suitable examples for the introductory clinical course, illustrating departures from normal structure and normal function; and surgical wards provide illustrations of all the manifestations and consequences of inflammation.

39. If the opinion reached in paragraph 36 be accepted, it follows that the training of an undergraduate in surgery should be directed to the recognition, early treatment ("first aid"), personal, social and economic effects of those surgical conditions commonly encountered in general practice: acute injuries, acute infections, abdominal emergencies, and malignant disease. We believe that adequate experience of the first three types can be obtained only by a

period of residence in a hospital organized to provide adequate instruction in them; the General Medical Council recommends a period of not less than one month, but in most medical schools this recommendation has not been adopted. We consider that it should be adopted by all at the earliest possible moment. Experience in the recognition of early malignant disease is best sought in out-patient departments.

40. It is of the greatest importance that the undergraduate should acquire some idea of the economic consequences of surgical accidents and illnesses. The most important of these are the period that must elapse before return to work, and the measures available for reducing this period to a minimum. On these questions much may be learnt if there is a proper organization of facilities for the "follow-up" of patients seen during the student's surgical training. Often only a short-term view would thus be obtained, and, so that he may see at least some surgical conditions in better perspective and especially that his grounding in general principles may be continuous, he should attend such long-term "follow-up" clinics as those for orthopaedic conditions and malignant disease. From both he will also learn the importance of the time factor in assessing results, and the importance of regular supervision and regular re-examination. This combination of experience should be designed to familiarize him with the necessity for graduated rehabilitation, and for the smooth interlocking of measures to this end, whether in ward, in convalescent home, in special rehabilitation centre, or in all three. Finally he should know how to set about helping his patients, if necessary, to find new occupations which are within their physical capacities and at which they will be able to work happily.

41. If, as we have recommended, the holding of house-appointments in hospitals, is made a compulsory pre-registration requirement, it will be better for both students and patients if technical training be limited to the principles of asepsis and antisepsis, and experience in performing minor surgical procedures be deferred to the period of house-appointment, when it should be gained under close supervision.

42. We turn now to consider the question of undergraduate experience in certain surgical specialities.

(a) **Orthopaedic surgery.** This branch of Medicine is related not only to surgery but also to the problems of physical education and industrial welfare; its value in illustrating principles has been noted in paragraph 38.

It may be assumed that when a co-ordinated medical service has been established, the distribution throughout the country of practitioners who have had post-graduate experience in orthopaedics will be such that no general practitioner will be called upon to complete the treatment of major physical disabilities. Thus the training of the undergraduate should include the recognition of injuries of bone and soft-tissue and the limitation of their effects by adequate first-aid; the early recognition of deformities; the ultimate effect of both on the patient and his future, and the means of minimizing the effects of both. This experience will be gained in special clinics (for example, fracture clinics), and in clinics devoted to the broad problems of rehabilitation, including its social, educational and economic aspects. Some of these problems (for example, surgical tuberculosis) are admirably suited to correlation with pathological and bacteriological questions, with the problem of preventive measures, and with the regulation of conditions of industrial employment. Full use should be made of facilities in teaching hospitals, in peripheral clinics, and in rehabilitation and vocational training centres. Possibly no other type of surgical condition offers so many opportunities for inculcating the important principle of considering every aspect of surgical illness. The teaching should be so organized that all concerned play integral parts.

(b) The principles of **neuro-surgery** will be best illustrated to the undergraduate if they are demonstrated with the co-operation of the neurologist and the psychiatrist. Reference has been made to their value in any introductory course; but here reference may be made to their importance in the primary care of head injuries, and to the importance of ensuring the recognition of the less common but often treatable condition of cerebral tumour.

(c) **Thoracic surgery** should be presented to the student as therapeutic agent, the use of which depends upon the recognition of disordered function and/or structure, and should not be divorced from the general problems of intra-thoracic disease.

(d) **Plastic surgery** is an example of a speciality whose possibilities—structural, functional and psychological—may be indicated to the student, without any instruction in its technical methods.

43. On the prompt and efficient treatment of an injury the life and even more frequently the economic efficiency of the patient often depends. Students must, therefore, be thoroughly instructed in the recognition and early treatment of injuries. For this purpose access is required to a properly staffed accident department. Such a department should exist in either the parent teaching hospital or one of the associated teaching hospitals.

44. In view of the fact that it is with the early aftermath of injuries that general practitioners will usually be concerned, the training of students would be facilitated and improved if they resided for a short period in whichever hospital of the teaching centre had the accident department and if, while so resident, they were notified immediately of the admission of every case.

45. We believe that it is possible for students to learn what is necessary of the matters covered in paragraphs 35 to 44 of this chapter in a period of six calendar months.

DISEASES OF EAR, NOSE AND THROAT.

46. Disorders of the ear, the nose and the throat form a considerable proportion of the cases dealt with in general practice and also in the school medical and child welfare clinics. All sections of the community at all ages are subject to such disorders, particularly those of the nose and throat. It is quite common for diseases of the ear, nose and throat to be associated with affections of the other systems.

47. A medical student needs an adequate basic knowledge of these regions of the body and their disorders. His training should include the use of the ordinary instruments and methods of examination, the recognition of the appearance of normal structure and the carrying out of simple tests of function. He also needs experience of the preliminary diagnosis of disordered conditions and the simpler methods of medical and surgical treatment, and some acquaintance with the general principles of the more complete examination of the ear, nose and throat. Time should not be spent in teaching the student the details of major procedures, nor should he be expected to devote time to watching operations.

48. Apart from occasional demonstrations on special patients in the wards, the clinical training should be given on out-patients treated in an ear, nose and throat department accommodated in either the parent or one of the associated teaching hospitals. It is essential, however, that at the out-patient sessions students should be able, personally, to examine patients and to carry out the various tests of function. It is of little value to a student to attempt to see into the depths of the ear, nose or throat over the shoulder of his teacher

or of another student. So that students can themselves make proper examinations, a number of examination tables with full equipment of lights and instruments should be provided in the out-patient department and reserved for the students' sole use.

49. A student will have an opportunity of deriving additional benefit from his training in the ear, nose and throat department if arrangements can be made for this training to precede his clinical experience of diseases of children and of infectious diseases and, in the case of those schools that provide such appointments, his appointment as a dresser in the casualty department. In infectious diseases and diseases of children there is a high incidence of ear, nose and throat conditions, while a considerable number of patients suffering from disorders of the ear, nose and throat are seen in the casualty department, many of these conditions being of the everyday kind met in general practice.

DISEASES OF THE EYE.

50. In nature and extent the clinical experience that a general practitioner, and consequently an undergraduate student, needs of disorders of the eye is very similar to that required with regard to the ear, nose and throat. He should be able to use the ophthalmoscope with sufficient skill to recognize the more important changes in the fundus due to general disease. He should know how to diagnose injuries and the common disorders of the eye, and to give first-aid and the simpler forms of treatment. It is not advisable for him to deal with errors of refraction with a view to their correction by spectacles unless he has had adequate post-graduate experience in an eye hospital or department.

51. The training, which consists of lectures, demonstrations and clinical instruction, can be given in either an ophthalmic department or ophthalmic hospital. Patients for demonstration should be selected not only from the ophthalmic department, but also from other departments dealing with general medical and neurological diseases.

ANAESTHETICS.

52. Students during their surgical dresserships should receive practical instruction in the induction and maintenance of the simpler forms of anaesthesia from anaesthetists. This instruction is best integrated with general medical principles if the department of anaesthesia is actively engaged in research work of both pharmacological and clinical types. To improve teaching and to further research, there is room for more senior whole-time posts in this subject.

DENTAL HEALTH.

53. If medical practitioners are to practise preventive medicine and to be health advisers to their patients, they must have an intelligent understanding, on general lines, of the health of the mouth and teeth. For medical students to acquire such an understanding, the arrangements for the dental care of patients in teaching hospitals will have to be considerably improved. It is essential that every teaching hospital, whether or not it is associated with a school for dental students, should have an adequately staffed dental department, that does conservative as well as extractive work and from the staff of which medical students can obtain the knowledge they need of the prevention and elementary diagnosis of dental disease.

CONTACTS WITH CLINICAL RESEARCH.

54. In the later stages of the training of the undergraduate student we believe that it would be useful to temper his training in scientific methods and outlook, accustom him to changing concepts, and stimulate his participation

in medical progress, by arranging for him to observe some piece of clinical research, or therapeutic trial, which is being carried out under strictly controlled conditions. For this experience to be of value in consolidating his grounding in principles, and in moulding his professional attitude, we emphasize the importance of method rather than of problem. It is clearly desirable that the experience should be so presented as to enable the student to view the whole investigation in proper perspective, so that he may grasp its possibilities for medical progress, and the value of this and similar methods in his professional life.

Chapter 11.

SOCIAL MEDICINE.

1. There is no generally accepted definition of social medicine and it is unnecessary for us to attempt to frame a comprehensive statement. As used by us the term includes the more restricted, though very important, subject of disease prevention. It also signifies a particular conception of Medicine; a conception that regards the promotion of health as a primary duty of the doctor, that pays heed to man's social environment and heredity as they affect health, and that recognizes that personal problems of health and sickness may have communal as well as individual aspects.

2. The importance of the promotion of mental and physical health and of the prevention of disease is being increasingly recognized by the medical profession and the general public. There is growing support for the view that a general medical practitioner should become the health adviser of his patients and their families and should participate to a greater extent in the conduct of the health services of the country. The evidence received from student bodies discloses encouraging signs that many present-day students desire to fit themselves for these tasks.

PRESENT TRAINING.

3. The training which most students receive at the present time is not sufficiently directed to this end. In most of the schools the scope of the teaching is too limited, the attention paid to the promotion of health and the prevention of disease is often perfunctory and largely divorced from the rest of the students' training.

4. The General Medical Council included prominently among the recommendations in regard to Professional Education which it adopted in 1936 the following paragraph:—

“Throughout the whole period of study, the attention of the student should be directed by his teachers (a) to the importance of the measures by which *Normal Health* may be assessed and maintained, and (b) to the principles and practice of the *Prevention of Disease*.”

Few medical schools have planned in a systematic way to give effect to this resolution. It appears to have been assumed that the teachers would have this objective in mind throughout their courses of instruction and would give equal weight to it as to the diagnosis and cure of illness. There is no evidence that such a course is being followed except to a limited degree in the teaching of obstetrics, infectious diseases, tuberculosis, and by a few exceptional physicians and surgeons. The general rule is to have a course of lectures on hygiene, sanitary science and the public health service. In many, but not all cases, these lectures are supplemented by a few instructional visits or demonstrations. One university medical school in which, incidentally, the

theoretical instruction in preventive medicine was slightly more extensive than that given in the majority of schools, informed us that the students taking the social study diploma of the university were taught the social aspects of preventive medicine more fully than the medical students.

5. In its evidence the General Medical Council submitted the following statement:—

“ The Council are of opinion that the study and teaching of Social and Preventive Medicine deserve further encouragement, in order that medical students and practitioners may be better acquainted with the influence of social, occupational, genetic, and domestic factors on the incidence of human disease and disability. It is desirable to seek and promote measures, other than those usually employed in the practice of remedial Medicine, for the protection of the individual and of the community against such forces as interfere with the full development and maintenance of man's mental and physical capacity.”

EXPERIMENTAL SCHEMES IN THE UNITED STATES OF AMERICA.

6. In the more progressive medical schools in the United States of America there is a growing tendency to place undergraduate teaching in social medicine in the hands of a separate department with a professorial head, and to regard such teaching as a curriculum spreading over two or more years. The schemes of presentation are still experimental but much useful experience has already been gained. One method is to provide a short introductory course of about 10 lectures before the students become absorbed in clinical work. This course consists of a general outline of the purpose and scope of social medicine with the object of showing how it fits into the life of the community and the daily work of the doctor. In the following year a course in bio-statistics is introduced, and in the next year the course in social medicine is longer and more specific and lectures and demonstrations are given throughout the year, the class meeting two or three times a week. A real attempt is made to give the students first-hand experience of social work by attaching them to almoners and other social workers. The students visit, under supervision, the homes and places of employment of their patients, and make written reports which are considered by the almoner; at the next class meeting the professor takes up the discussion of selected patients and uses the material as subject matter for tutorial work. Much of the teaching is given in small tutorial classes, the size of the staff of the department being sufficiently large for this purpose.

THE TRAINING TO BE PROVIDED IN GREAT BRITAIN.

7. Since submitting evidence to us the Royal College of Physicians of London has published an interim report by the Social and Preventive Medicine Committee of the College. We have been glad to note that on general principles this Committee's conclusions are substantially the same as our own.

8. If students are to be fitted to become health advisers and members of a new comprehensive health service, the ideas of social medicine must permeate the whole of medical education. A new orientation of medical education, a big expansion in the social work of teaching hospitals, and fundamental changes in the outlook and methods of most of the teachers are involved. At the present early stage of development it is difficult and undesirable to define in detail the scope of the training. This matter is one which can be satisfactorily settled only in the light of experience gained from experiments. Nevertheless, the general lines which the training should follow seem clear.

9. The foundation should be laid during the teaching of anatomy and physiology. There are great advantages in directing the student's attention to the factors concerned with the promotion and maintenance of mental and physical health when he is studying normal structure and function and before he encounters disease. At this time he can easily be interested in the fundamental importance of health and the prevention of disease, and during the courses in anatomy and physiology there are frequent opportunities to stress and explain the influence of environment. Introduced at this early stage, the effect is certain to be more permanent and more significant than if introduced later when the mind is much occupied with ill-health and curative medicine.

10. Physiology offers more frequent opportunities than anatomy, and the subjects of nutrition and fatigue provide typical examples, but anatomy may also play a useful part in the study of growth, posture, respiratory movements and the like. Valuable use at this stage and later can be made of the student's health service and the effects of exercise and physical training may be studied and tests for physical fitness performed. By such means the subject is made a reality from the beginning and its supreme importance is established in the student's mind.

11. During the clinical period the student's training in social medicine should include:—

(a) Proper emphasis throughout his clinical studies on the social and preventive aspects.

(b) Personal investigations of social and industrial conditions.

(c) Instruction on the communal and administrative sides of disease prevention, on the history of preventive medicine and the evolution of the medical and social services.

Each of these will be considered in turn:

(a) **Proper emphasis throughout his clinical studies on the social and preventive aspects.**

12. Clinicians have been in the habit of utilizing a patient's past medical history to shed light both on his present illness and on its possible outcome. It has not been sufficiently recognized or taught that in the study of the patient's life as a whole may often be found the reason for his illness and the only key to the restoration of his health. This conception is gradually, if somewhat slowly, being established in both curative and preventive medicine. By precept and example, the clinical teachers can help the student to realize that, as a medical practitioner, it will be his duty to decide on the treatment of any patient against the background of the following considerations:—The fact that this person has fallen ill may be due to causes associated with home conditions, his work, or even the manner in which he uses his leisure; his recovery may be hastened or retarded by his mental state while under treatment, and his full restoration to health may depend largely upon what facilities for rehabilitation are available to him, and on the social circumstances in which he finds himself after cessation of active medical treatment.

13. That these considerations are essential in medical practice is so obvious that some may experience surprise that it should be considered necessary to draw attention to them. Unfortunately it is the case that they do not enter nearly as much as they should into the thought and practice of a large part of the medical profession to-day, and that in the training of students the attention of both teachers and students is concentrated, as a general rule, on the stages of diseases seen between the time a patient first appears in hospital and the time he is discharged from hospital. There are still important

hospitals which do not employ a single social worker and there are others in which the almoner is regarded as a person whose main function is to assess the ability of the patients to contribute to the cost of their maintenance and treatment in hospital. The important place of the almoner and other social workers in the practice and teaching of social medicine is considered later.

14. If students are to acquire the right outlook they must see their teachers enlisting the help of almoners, psychiatric social workers, health visitors and other welfare workers, and considering clinical problems against the background of the patient's domestic circumstances and environment.

15. Much profitable teaching can be given in the various clinics which form part of the personal health services provided by local authorities. If health centres are established, those in the neighbourhood of the medical schools should become important centres for the education of students. Ways in which the personal health services may be utilized for teaching purposes are considered more fully in the various sections devoted to the relevant branches of Medicine. One essential factor, however, should be stressed here. It is that the clinical teachers concerned should be associated, as intimately as possible, with the appropriate personal health services of the area surrounding the medical school. In many cases they might with advantage take part in the conduct of these services. Such associations are needed partly to facilitate the linking of these services with medical teaching, partly because of the benefits to the services, and particularly because of their influence on the mind and outlook of the teachers.

16. The evidence submitted by the London County Council and by the organizations that represent the other major local authorities shows clearly the importance that, as a result of their experience in the fields of public health and social welfare, these authorities attach to medical students being made aware of the social and preventive aspects of Medicine as an integral part of their training. We are assured that these authorities will welcome the opportunity of co-operating fully in providing facilities for medical students to receive organized instruction in the public health and social welfare services.

(b) Personal investigations of social and industrial conditions.

17. To reinforce the impression of social medicine that he should have gained from his teachers in wards, out-patient departments and clinics, and to strengthen the habits of thought that he should have formed there, the student needs opportunities for gaining some experience of the conditions under which people work and live. When acting as medical clerk or surgical dresser he should be required to select one or more patients, and to include the "social diagnosis" in the case-study of these patients, in addition to the medical history. Under the supervision of the general practitioner and the guidance of the almoner, he should visit the home, possibly the patient's place of employment if a works doctor or welfare supervisor is employed there, and any assisting agencies. It would also provide him with valuable experience if, again with the assistance of the almoner, he "followed-up" a few patients after their discharge from hospital. Should any organized system of group practice be a feature of the health services of the future, it might be possible to utilize this system as an additional means of giving students some experience of the influence of home conditions.

18. As Professor James Mackintosh* has written: "The student's understanding of social medicine is hopelessly inadequate unless he is given a practical knowledge of housing conditions and their effects on health. This

* Until recently Professor of Public Health in the University of Glasgow.

can be undertaken in the course of his social studies in the field and his reports would be incomplete without some assessment of housing, overcrowding, and the environment generally. Overcrowding, even apart from slum conditions, is always a menace to health, but if the student regards it from the physical point of view alone, he will seriously under-estimate its significance. The ill-effects upon mental health, working capacity, and general well-being are apt to be overlooked, and it is an important part of the teaching of social medicine to emphasize the undermining effect of overcrowding on the whole structure of family life."

19. From the point of view of teaching undergraduate students, problems of industrial health may well be included within the wide scope of social medicine, leaving to the post-graduate period a more detailed study of the many technical problems arising in this field. The undergraduate student must appreciate, however, that, quite apart from occupational hazards, conditions of work, both mental and physical, must inevitably play their part in the cause of ill-health and must be understood when planning for a return of men and women to active life after a period of illness.

- (c) **Instruction on the communal and administrative sides of disease prevention, on the history of preventive medicine and the evolution of the medical and social services.**

20. The student should learn something of the communal and administrative aspects of preventive medicine and should acquire an elementary knowledge of the duties and responsibilities of a medical officer of health. By this means he can be led to appreciate that prevention is a communal as well as an individual problem, and to realize the ways in which a general practitioner can help the medical officer of health and the public health authority, and in turn can be helped by them in his own practice. His understanding of these matters and of social medicine generally is likely to be aided if he is given a short, elementary account of the development of the medical and social services, of their relation to the social structure and of how progress in the promotion of health has been hindered by such evils as bad housing, ignorance, unemployment, and destitution. The historical approach can be a source of inspiration to the student.

WHO SHOULD BE RESPONSIBLE FOR THE TRAINING?

21. It must be recognized that the provision of training on the lines outlined above will not quickly be fully accomplished. The rate of progress will be conditioned to a large extent by the interest and co-operation forthcoming from the general body of teachers and by the adaptability they display in changing their habits of thought and methods of practice and teaching. We may hope that in years to come the general body of teachers will place the necessary emphasis on the social, environmental and preventive aspects of Medicine. In the meantime the main responsibility will have to be carried by comparatively few pioneers.

22. The arrangements which a medical school should make to secure that its students are properly trained in social medicine are matters on which there is much room for experiment. Each school should make the experimental arrangements as soon as it can. Whatever may be their exact form, these arrangements should be designed—

(a) to secure an adequate organization and integration of the teaching of social medicine in all its aspects.

(b) to achieve the closest possible liaison between the medical school and its hospitals on the one hand, and various outside agencies and persons on the other. These outside agencies and persons include local public health

departments, social welfare departments of local authorities, factory doctors, local officers of the Ministry of Health and Ministry of Labour and National Service, various voluntary organizations, and general practitioners of the district in connexion with the visits of students to patients.

(c) to enlist the wholehearted interest and co-operation of the general body of teachers.

(d) to develop and utilize to the full for teaching purposes, the social welfare departments of teaching hospitals, and, particularly, the almoner's department.

(e) to build up an adequate students' health service.

(f) to encourage and facilitate, wherever practicable, the training in matters of health and preventive medicine of school teachers and other non-medical persons without whose intelligent collaboration the promotion of the health of the community cannot be fully achieved.

23. It seems very unlikely that the first three of these objectives can be achieved unless there is someone on the staff of the medical school whose principal interest and responsibility is the furtherance of teaching and research in social medicine, and who is free to devote a considerable amount of time to the performance of this task. It appears essential that such a person should be one who, by virtue of his qualities and status, is able to exercise influence on the policy of the school and on his colleagues. The field of choice is a restricted one at the present time and it may be necessary to train suitable men and women specially for these posts.

24. While believing that no medical school can be regarded as providing training of the requisite scope and standard unless it caters properly for the teaching of social medicine, we deprecate premature appointment to posts in social medicine. The aim of each school should be to create the post, and to fill it as soon as the right person is available, if necessary providing special training and experience for a likely person.

25. Each medical school should review its arrangements for teaching public health (or hygiene or preventive medicine). Generally, the present teachers are officers of the health department of the county, county borough, or metropolitan borough in which the school is situated. In four schools (the Universities of Oxford, Edinburgh and Glasgow, and the Welsh National School of Medicine) there are whole-time professors, whose chairs bear the title social medicine, or public health or preventive medicine, and the University of Birmingham has decided to substitute a whole-time chair in social medicine for the part-time chair in hygiene and public health that it has had hitherto. In several of the English provincial schools there is a part-time professor who is usually a medical officer of health and unable, on account of his heavy administrative duties as such, to devote sufficient time or attention to the medical school. In other schools the teacher has the status of a lecturer. The relations within the school between the teachers in infectious diseases, tuberculosis, etc., and the professor or lecturer in public health vary, although they may be members of the staff of the local authority's health department of which he is head.

26. The background and current contacts of the person who is made responsible for organizing the teaching of social medicine are matters of first importance. To be a stimulating teacher he ought to have taken part in investigations aimed at furthering knowledge in some province of social medicine; and, in order that his teaching may not become divorced from practical problems and affairs, he should have continuous contacts with "field work" in social medicine. If he is to organize and participate in the post-graduate training of practitioners who wish to enter the public health service, as he will in a number of the schools outside London, he must also have had good

practical experience in public health administration. It will be essential for him in any event to enlist in every way possible the help of the local medical officers of health and their staffs.

27. Various possible arrangements have been suggested and are mentioned here in the hope that they may assist the medical schools to find the one best suited to local circumstances. One method is to appoint as whole-time professor a practitioner who has had intimate experience of some branch of social medicine and to secure for him a definite status in one or more local public health departments, providing him with automatic access to the material and problems that will keep him in touch with the practical aspects of his subject, and entitling these departments to his advice and service, particularly in educational matters and "field work." This method has been adopted by the University of Glasgow. The Corporation of the City of Glasgow co-operated with the University in the appointment of the last holder of the professorship of public health. It contributed a proportion of the professor's salary and gave him an appointment in the public health department, his duties there relating to the organization, on behalf of the medical officer of health, of all teaching on social medicine. ...

28. Another possibility is to select a well-trained young physician who is specially interested in, for example, tuberculosis, paediatrics, occupational diseases, the study of rheumatism or some other social disease. This arrangement might be more applicable to such provincial schools as do not give post-graduate instruction in social medicine and to the medical schools in London. In the case of the London schools it may be desirable to have university chairs in social medicine at, say, two of the schools, but at least for some time to come there is little likelihood of such a chair being established in each of the schools. The pattern might vary from school to school, but this physician would need to have access to patients in any of the wards of the teaching hospital for the purposes of his investigations. He should be expected to arrange a number of demonstrations to students on selected cases. The "follow-up" of cases discharged from hospital might well be under his supervision, as might also the management of the students' health service. A close relationship should be established between him and the local public health department, either by giving him a part-time appointment in such department or by other means. The person selected should receive a period of special training, in this country and abroad before assuming his responsibilities for the teaching of social medicine.

29. A variant of the last mentioned suggestion is to make the main clinical interest of the physician selected the maintenance of the health of students and of the nursing and other staff of the teaching centre. This proposal would lead to the presence in a position of influence in the teaching centre of someone whose main clinical duty was to act as a health adviser.

30. In the interests both of teaching and of the social welfare work of the hospital it would be advisable for the person on whom responsibility for organizing and furthering the teaching of social medicine is placed to be made responsible for the general direction of the social workers of the hospital. Further it would be advantageous if his department became the centre in the school for information and teaching on statistics, and he and his staff acted as guides and advisers in the collection of statistical data and their handling for teaching and publication.

THE PARTICIPATION OF SOCIAL WORKERS IN THE TEACHING OF SOCIAL MEDICINE.

31. The following statement submitted in evidence by the Institute of Hospital Almoners has our entire approval:—

"It is realized that almoner's work is concerned with only a small part of the wide field of social medicine, yet within the hospital the almoner's

department is the means by which the principles of social medicine and diagnosis may be demonstrated in the treatment of patients. It is useless to lecture to students on the importance of considering living conditions in the treatment of certain diseases if, owing to inadequate staffing in the almoner's department, they see that patients leave the hospital sometimes without advice or help concerning the social factors influencing their health. The students must see in practice the application of the principles they are taught. It is therefore essential that the teaching hospital should face the necessity of maintaining or of building up an almoner's department adequate to meet the standard set by the medical school. In other words, a first-rate medical school must be served by a first-rate almoner's department."

32. To this statement we would add that there is a need in the case of many hospitals for a wider conception of the almoner's duties. Instead of being principally an assessor of contributions from patients, she should be first and foremost a social welfare worker. Indeed it is open to doubt whether her value as a social worker may not be hampered to some extent if she is concerned in the assessment of patients' ability to pay. In the United States of America it is the practice to make an officer not concerned with the social welfare work of the hospital responsible for this work.

33. The proper functions of the almoner's department have been briefly summed up by the Institute of Hospital Almoners as follows:—

- (i) To share in the discovery of those aspects of the patient's social and psychological background which are relevant to the diagnosis and treatment of his disease.
- (ii) To co-operate with the medical staff to enable the patient to carry out the treatment recommended. This entails individual social casework both in the hospital and with outside social agencies.
- (iii) to re-establish the patient, as far as possible, in normal life and to prevent a recurrence of illness.
- (iv) to participate in research and to promote social reform.

The methods by which these functions can be performed will vary according to local conditions, but they will usually include the following:—

- (i) Intensive work for some patients and for all patients suffering from certain diseases.
- (ii) Visits to the homes of certain patients needing special help and after-care, and personal contact with other agencies concerned in their welfare.
- (iii) Participation in discussions with social agencies and Government departments to link the hospital and the community in questions concerning particular patients or general social conditions.
- (iv) Co-operation in the making of hospital policy in those aspects which particularly concern the social welfare, or the comfort and convenience, of the patients.

34. It is essential that the teaching hospital should have an almoner's department of this nature and that the almoners should participate to the fullest possible extent in the training of medical students. On these matters there is no doubt, but at the present time, broadly speaking, almoners have no part at all in teaching, only a very small beginning having been made in a few schools.

35. The almoners cannot perform their proper functions and also take part in the teaching of students to the extent desirable unless there is a sufficient number of them on the staff of the teaching hospital, and their department is provided with adequate clerical assistance. Considerable expansions of staffs in both these respects are generally necessary.

36. The services of other social welfare workers, such as psychiatric social workers and health visitors, should also be fully utilized, within their respective spheres, in the training of students.

Chapter 12.

CHILD HEALTH.

1. In this chapter we devote attention to the training of medical students in the health and diseases of children from birth onwards. To an increasing extent the term "paediatrics" is being applied to this branch of Medicine, and the title "paediatrician" is being assumed by those who specialize in it. In certain medical schools the departments concerned bear the title "child life and health" or "child health" and by some, as by us, these titles may be preferred, as emphasizing more emphatically, the importance of health in child medicine. Any of these titles is better than those, still used in some medical schools and hospitals, which convey the impression that the subject is concerned solely with sick children and the diseases of children.

THE IMPORTANCE OF PROPER TRAINING IN CHILD HEALTH AND CHILDREN'S DISEASES.

2. There are at least two good reasons why medical practitioners should be well versed in the care of children in sickness and in health. First, a considerable part of the practice of the average family doctor is concerned with children. Second, the protection of child life is vital to the future of the nation, and the raising of the standard of child health provides one of the most promising means of securing a general improvement in the health of the community. It is, therefore, of the greatest importance that medical students should be properly trained in this branch of Medicine and that throughout such training the emphasis on the nutrition and development of normal healthy children should be as great as on the treatment of sick children.

3. In Great Britain during the past fifty years the services for the care of children have done great work and have achieved results of far-reaching national importance. It is, for instance, a noteworthy achievement that the number of children dying under 1 year of age has fallen from 150 out of every 1,000 born alive, the rate at the end of the last century, to 49 per 1,000 related live births, the rate in 1942. A tribute is well deserved to the services that have contributed to this achievement. In expressing this view we do not imply that there are any grounds for complacency. In other parts of the world, particularly in New Zealand and the United States of America, the infant mortality rate has declined far below the lowest level achieved in this country. No appreciable reduction has been made in this country during the past half century in the neo-natal mortality rate (i.e. the rate for deaths of children under 4 weeks of age). The different standards of health among children of various economic groups constitute a grave problem that presses for solution.

4. To safeguard its own future, the nation will have to improve greatly its provision for the welfare of children. These improvements will extend beyond the immediate sphere of Medicine; but the medical profession will fail in its responsibilities to the community unless its members are willing and able to devote their knowledge and skill to the task of raising the health of children to the highest possible level.

5. Generally in the medical schools in Great Britain the teaching about children has been inadequate and only faint interest has been taken in the subject. The inadequacy has been due in part to lack of facilities for the

study of the subject, principally as it concerns the problems of child health and normal development. In contrast, child health has been recognized in the United States of America, in Canada and in some other countries, as a major subject; alongside medicine, surgery, and obstetrics and gynaecology, in the training and examination of medical students.

THE TRAINING THAT SHOULD BE PROVIDED.

6. We have come to the conclusion that the teaching of paediatrics can best be developed along the lines that child health and children's diseases constitute an important part of the training in general medicine, and, to a lesser extent, in surgery, and that, in addition to a relatively short period that is devoted to intensive training in the subject, teaching on the health and diseases of children should run like a golden thread through the whole of the curriculum. In the pre-clinical period, the instruction in anatomy and physiology should include due emphasis on growth and mental and physical development of children. Many present-day students are seriously lacking in knowledge of these subjects. In the clinical period, if more of the practical training were based on children a better experience would be provided. Not only would the student be better equipped to deal with one of the main parts of his practice if he becomes a family doctor, but he could improve his ability to treat adult patients, by acquiring a higher degree of skill in clinical observation. There is a danger that, owing to increasing reliance on clinical histories and laboratory tests in diagnosis, a student may not develop the art of clinical observation and judgement as highly as he should. Contacts with sick children will provide a safeguard, since in many cases it will be impossible for him to obtain a clinical history, and diagnosis will have to be made on the basis of observation, supplemented by laboratory tests. The attention of a student, however, should by no means be confined to children who are ill. He should be brought into touch as much as possible with healthy children. Child health constitutes one of the main elements in preventive medicine. Social and environmental conditions are at least as important, and can be studied as usefully, in relation to children as to adults.

• 7. The part of the undergraduate course in which the student is required to study child health and children's diseases intensively should include instruction and practical experience in (i) the care and management of new-born infants; (ii) the nutrition and development of normal healthy children and (iii) the diseases of children.

Care and management of new-born infants.

8. The most suitable place for the training in the care and management of new-born infants is the maternity hospital or department in which students receive their training in obstetrics. It should be given concurrently with the latter training. Such an arrangement would be in accord with the views of the General Medical Council.

9. The Council has recommended that a period of six months should be devoted to the training in obstetrics, gynaecology and infant hygiene; that this training should include practical instruction in wards and out-patient departments, in ante-natal and post-natal care and in the care of the new-born infant, and that for a period of not less than two months a student should be a resident pupil in a maternity hospital or department, these two months being devoted exclusively to instruction in obstetrics and the hygiene of children.

10. The association of paediatrics with obstetrics, especially in regard to pre-natal nutrition and accidents during labour, is of great importance. Every maternity hospital or department ought to have a paediatrician on its

staff; it is essential that a paediatrician should be attached to a maternity hospital or department in which medical students are trained. The association of the training in paediatrics with that in obstetrics will help to make the student realize the effect of the mother's condition during pregnancy on the health of the child at birth, and should imbue him with the aim to secure a healthy child at birth, and to keep it healthy afterwards. The paediatrician attached to the maternity hospital or department should collaborate with the obstetricians in the ante-natal clinics as well as in the wards, and should be responsible for an infant welfare clinic attached to or closely linked with the maternity hospital or department. The student's training on new-born infants should be under the direction of this paediatrician and should be conducted in the wards and nurseries and in the associated infant welfare clinic. It would be beneficial if arrangements were made for students to "clerk" to the infants as well as to the mothers. If students are able to visit the homes of the mothers and their babies after their discharge from hospital they would gain experience that would be helpful to them later as general practitioners. It is in the home that the issue of health or sickness of the child is mainly decided. Such visits should be made with the approval of the family doctors concerned, and under the supervision of the almoners of the hospital and the welfare visitors of the local authorities.

Nutrition and normal development.

11. For the remainder of the training on child health full use should be made of the school medical and infant welfare services; both, if properly used, can make a considerable contribution. The student should make further attendances at infant welfare clinics. Here, in addition to learning how to deal with minor ailments in children, he can gain practical experience of the problems of normal growth. There would be considerable advantages if he could also attend the special departments of the school medical service and child guidance clinics.

12. A few of the medical schools have been able to arrange a limited measure of co-operation with the school medical and infant welfare services but throughout the country these services are generally divorced from the medical schools and teaching hospitals. The children's welfare services, including that part of the tuberculosis service that relates to children in the district in which a medical school is situated, should form a component part of the medical teaching centre, and there should be the same measure of co-operation between the local authority and the medical school, with regard to the work and staffing of these services and their use for teaching purposes, as exists between a medical school and its teaching hospitals. Such co-operation would prove beneficial to the services and to medical education.

Diseases of children.

13. The children's department or children's hospital in which students are instructed on children's diseases must be of adequate size. If a children's department is used, it should be in the parent or one of the associated general teaching hospitals of the teaching centre. If a separate children's hospital is used it should be a component part of the centre. In the case of a medical school admitting 100 students a year, the children's department or hospital should have 100 beds.

14. Before the war the medical schools outside London, with one exception, had access for teaching purposes to children's hospitals having 100 or more beds, and the proportion of such beds to students admitted to the medical school each year was one or higher. In London the position was not so satisfactory, as is shown by the following table, which gives the number of beds

in the children's department of the parent teaching hospital of the medical schools of the University of London, and the approximate annual admission of students to the clinical part of the course:—

School.	Approximate pre-war intake of students annually to clinical part of course.	Number of beds in children's department.	Ratio of children's beds to students.
Charing Cross Hospital	30	20	.7
Guy's Hospital	97	46	.5
King's College Hospital	50	54	1.1
London Hospital	75	79	1.1
Middlesex Hospital	80	24	.3
Royal Free Hospital	57	37	.6
St. Bartholomew's Hospital	120	18	.2
St. George's Hospital	33	16	.5
St. Mary's Hospital	70	32	.5
St. Thomas's Hospital	90	32	.4
University College Hospital	74	47	.6
Westminster Hospital	36	31	.9

Some of the schools arranged for some or all of their students to attend the Hospital for Sick Children for training on diseases of children. Our proposals for securing for the London medical schools adequate facilities for teaching this subject are set out in chapter 3 and Appendix H.

15. Some witnesses have strongly advocated that in a children's hospital or department, the children should not be segregated into medical and surgical wards, but instead should be admitted to a combined medical-surgical unit that has a trained paediatrician at its head. This paediatrician would be responsible for the patient, in collaboration with such surgical or other specialists as the nature of the case demanded. This proposal is founded upon the view that a child in hospital should be regarded primarily as a sick child. Should, for example, the child's illness include conditions requiring surgical treatment, it is claimed that the child will stand a better chance of receiving suitable attention, having regard to his stage of development, if he is under the care of a paediatrician, in collaboration with the surgeon, and is regarded as a child with, say, an ear, nose or throat complaint, rather than an ear, nose or throat patient for whom the specialist surgeon alone is responsible. This matter is not one on which we are competent to express an opinion; but, in view of the importance which it may have in the care of children, we have felt that attention should be drawn to it.

16. The student's training should include a period of clinical clerkship and also a period as a resident student in the children's department or hospital. So that the training is usefully biased towards the needs of general practice, the student should be brought more into touch with patients in the acute wards than with chronically sick children. It is essential that a general practitioner should be able to assess the degree of illness in a child. The examination of, and the recognition of illness in, a young child are very difficult. Many of the patients in the acute wards will provide him with valuable experience in both these respects. The General Medical Council has recommended that the period of clerkship shall be of not less than one month's duration. The British Paediatric Association in its evidence advocated that the clerkship should extend over three months and should be whole-time. If the length of the medical course is reduced, as we recommend elsewhere in our report, it is doubtful whether the medical schools could arrange for whole-time clerking in paediatrics for three months. We suggest that it will be sufficient if a student serves a clerkship in paediatrics for two months during one of which he is a

resident pupil. When resident, a student can be given opportunities, which otherwise would be fortuitous, of gaining experience of special value to a general practitioner, for example, by contact with patients at the time they are admitted to hospital. At least two medical schools have already made arrangements for students to reside for a short period at a children's hospital. The period is one week at one school and three weeks at the other.

17. The adoption of our suggestion of one month's residence is dependent upon the provision of the requisite residential accommodation. Generally speaking, such accommodation does not exist at the present time.

18. In order that the student's view of children's diseases may be kept in proper perspective, arrangements should be made for him to maintain his contacts with healthy children throughout the period of his training in the children's department or hospital.

Association with training in other subjects.

19. Reference has already been made to the need for co-operation between obstetricians and paediatricians, both in their practice and teaching, and to the linking of the teaching on child health with that on social medicine. Some measure of association should also be established between the teaching on paediatrics and that on certain other subjects, particularly orthopaedics, infectious diseases and psychiatry. There are many conditions where the combined work of paediatricians and orthopaedic surgeons is valuable. Most of the work of infectious diseases hospitals is concerned with sick children, the most common infections occurring mainly in childhood. It is, therefore, desirable that paediatricians should be associated with the work of these hospitals. So far as practicable the student's separate training in infectious diseases should follow his intensive training in paediatrics. There will be obvious advantages if any paediatrician associated with the infectious diseases hospital forming part of a teaching centre is chosen from the staff of the paediatric department of the medical school.

20. The student's experience in the children's department or hospital can profitably be linked with his training in psychiatry if arrangements are made by the paediatricians to enlist the help of the psychiatrists in the teaching centre in dealing with many of the problems of behaviour which cannot be related to any organic disorder.

STAFF OF THE DEPARTMENT OF CHILD HEALTH.

21. On the staff of every medical school there should be a person of senior university status responsible for organizing and supervising the students' training in child health and children's diseases. The paediatricians who have given evidence, and some of the medical schools, have emphasized the importance in their view of this person having the status of a professor. At the present time there are five university professors* of the subject in Great Britain. Only one of these professorships is a whole-time appointment. We consider that there is a good case for establishing a university professorship in child health in a medical school, provided that the department deals fully with child health as well as with children's diseases. The establishment generally among the medical schools of chairs in child health must, however, wait upon and accompany the widening outlook, on the part of paediatricians and others, on the scope of the subject. The essential emphasis on the health of children, as distinct from the diseases of children will not be achieved without a marked change in the outlook of paediatricians of this country.

* One holds a chair in child life and health, one in child health, one in paediatrics, one in infant hygiene and diseases of children, and one in diseases of children.

In the past they have shown too little interest in child development and have tended to confine their attention to the care of the sick child and the study of children's diseases. There are encouraging signs that the change of outlook is already taking place and that, increasingly, paediatricians on the staffs of hospitals will be among the leaders in the important work of promoting health.

22. Two important questions require consideration in connexion with the staffing of the department of child health. The first is whether it is desirable for all or some of the staff to limit their practice to children. The second is whether any of the staff should be whole-time officers of the medical school. With regard to the first of these questions, there are arguments for and against a paediatrician dealing with adults as well as children. If he limits his practice to children he will obviously be able to make a more intensive study of children and their ailments. On the other hand it is argued in favour of a paediatrician dealing with adult patients that only thereby can the natural history of many diseases be properly studied.

23. Undoubtedly many paediatricians have been led to practise general medicine as well as paediatrics, because as a rule the earnings that can normally be derived from private practice in paediatrics are small. They could not afford to devote the whole of their time to the care of children unless they held a whole-time appointment, or had other sources of income in addition to their earnings from private practice (for example, part-time appointments in the local authority's infant welfare service). If more paediatricians are to be encouraged to devote all their time to children, this economic consideration will have to be adequately met. The payment of salaries for hospital services and clinical teaching duties should ease the position considerably.

24. Before stating the conclusion that we have reached on this question, we wish to turn for a moment to the second question, which is whether it is necessary for any of the staff of the paediatric department to be whole-time officers. The head of the department of child health should probably be whole-time, if not in the medical school, at least in the teaching centre associated with the school. This view is influenced by the consideration that, in addition to his teaching, research and hospital duties, he should maintain close association, in a directing or advisory capacity, with the child welfare services of the teaching centre and the surrounding district. With regard to the rest of the staff, the junior members should be whole-time, those of intermediate and senior status might be whole or part-time according to local circumstances. Some of them may have to be employed whole-time in the teaching centre, although only part-time in the school, in order that the associations with the infectious diseases hospital, the maternity work and the child welfare services may be fully developed.

25. In the light of our views on the second question, the conclusion that we have reached on the first is that paediatricians holding senior positions in the medical teaching centres should be encouraged to devote themselves wholly to paediatrics. For the other members of the staff who are in earlier stages of their career, there may be advantages in their combining the practice of paediatrics and general medicine.

PLACE OF PAEDIATRICS IN FINAL QUALIFYING EXAMINATION.

26. If the place of paediatrics in the undergraduate course is to be assured, adequate recognition must be given to the subject in the final qualifying examination.

Chapter 13.

PSYCHIATRY.

1. Psychiatry is that branch of Medicine that is concerned with the mental aspects of health and sickness. At one time its scope was more or less limited to "mental" disease (i.e. the psychoses or forms of lunacy), but during recent years this narrow view has been replaced by a broader conception. Nowadays, there is increasing recognition of the wide incidence of psychological factors in the causation of disorder. This recognition extends not only to the mass of major and minor psychoneuroses which form a large part of every doctor's practice, but also to the important part which these factors play in the progress and treatment of many essentially organic diseases, and in social medicine and the promotion of health. Whether he is dealing with problems of health or sickness, a medical practitioner cannot fully understand his patients and advise and treat them adequately unless he pays due attention to their psychological background. The better the doctor, the more attention he pays to this background without perhaps thinking that he is doing anything "psychological"; but for the most part, nowadays, he has to rely mainly upon natural insight and commonsense, rather than on trained understanding and experience, the reason being that, with few exceptions, the training which the medical schools still provide is based upon the narrow, old view of the scope of psychiatry.

2. While there are some differences in the arrangements of the various medical schools, the usual practice is for the student to be required to attend only a short course of lectures and demonstrations on established mental diseases. The value of these courses to undergraduate students is very limited. They are concerned with conditions which a practitioner will meet only occasionally in general practice. The student's clinical contact with patients is limited to demonstrations, and, since these demonstrations are normally held in mental hospitals which the student visits specially for the purpose, he has no continuity of contact with patients suffering from mental disorders. In some medical schools a few additional lectures on psychoneuroses may be given and students may attend a psychiatric out-patient department, but, in general, attendance is not compulsory at either these lectures or the out-patient department. A more thorough training in psychiatry is given at one or two schools.

3. Why has the provision for training in psychiatry failed to keep pace with the growing realization of the important place the subject should occupy in medical thought and practice? While not attempting a complete answer to this question, we think that the following likely contributory causes should be noted because of their bearing on future progress:—(i) The mental hospitals and their medical staffs have been almost completely isolated from the general hospital service and there have been very few posts for psychiatrists in the teaching hospitals. (ii) As a result there has been a discouragement to the recruitment of the ablest practitioners to this branch of Medicine. There has also been a lack of stimulus to those who have specialized in it to acquire that measure of experience in general medicine that is usually obtained by men in other branches of Medicine before they embark upon studies and posts peculiar to their speciality. (iii) Hence psychiatrists, as a class, have tended to lack the prestige in the medical profession possessed by other practitioners of consultant status. There are notable individual exceptions. (iv) Owing to the limited opportunities for work in the teaching hospitals

most of those psychiatrists who did not wish to confine their interest to the psychoses and to work in mental hospitals have been compelled to give their services to clinics separate from, and independent of, the medical schools and teaching hospitals. Many of these clinics have met a real need and have provided useful courses of training, but their detachment from the main body of medical education and practice has deprived their staffs of that contact with other branches of Medicine which is necessary for progress and the preservation of a true perspective, and has weakened their influence on the development of medical education.

4. Whatever view may be taken on the causes, the following facts are clearly established. First, that at the present time there are not enough psychiatrists in this country competent to teach psychiatry well in all the medical schools. Second, that the accurate knowledge possessed by psychiatrists of mental disorders and their treatment is still of modest dimensions. Particularly in respect of psychoneuroses, "there is a multiplicity of schools of thought, both as regards theory and practice, and it is not easy to define the boundary separating established and generally accepted knowledge from formulations adopted by one school, but by no means accepted by its rivals. These differences are no doubt becoming less marked, and some degrees of co-ordination between these various schools is gradually being reached, but at present the divergencies cannot be disregarded".*

5. As in the case of social medicine, with which psychiatry has much in common, the primary problem is to build up an adequate supply of teachers, and, as suitable teachers become available, to provide them with proper facilities in the medical teaching centres for the development and teaching of their subject. The responsibility in both these respects must rest on the medical teaching centres, and it is a matter of urgency that vigorous action should be taken in fulfilment of this responsibility. Progress cannot be made in providing medical students with the training they need in psychiatry or in extending knowledge of the psychological aspects of health and sickness until an adequate number of psychiatrists of broad views and balanced judgement, well-trained and experienced in both general medicine and their chosen subject, are occupying positions of influence in the teaching centres.

6. In future, a medical teaching centre cannot be regarded as making proper provision for the training of medical students unless it has an active department of psychiatry, the work and teaching of which are interwoven with the work and teaching of the other departments. For the large majority of the teaching centres, the building up of these departments will have to be undertaken slowly as suitably qualified staff become available. Most of the centres should be able to establish the nucleus of a department within a reasonable period after the end of the war. Generally, progress may be slow at the beginning, but later the rate should steadily improve. Much will depend on the provision which the existing well-established departments of psychiatry, and such other departments as can be more or less fully established in the near future, are able to make for the post-graduate training and experience that practitioners require if they are to become specialist psychiatrists in the teaching centres. The nature of such training and experience is considered in a later section.

7. Although all medical schools cannot be expected to reach the objective for some years, it may accelerate progress if a view is formed now of the kind of department of psychiatry that should exist in every teaching centre

* From the memorandum of evidence submitted by Dr. Bernard Hart.

when the necessary staff is available. The following broad outline is submitted in the hope that it will help such a view to be formed:—

(a) While maintaining close association with the mental health services of the locality, the department should have its headquarters in one of the general teaching hospitals of the centre. This hospital need not be the parent teaching hospital.

(b) The staff of the department should be competent to deal with psychoneuroses, psychoses, mental deficiency, social problem cases, medico-legal cases and child guidance.

(c) The head of the department as such should have the same status within the teaching centre as that of any other departmental head. In the teaching hospitals he should have senior staff rank, on a par with the other physicians. According to individual and local conditions he may be a professor, reader or senior lecturer of the university. At the present time there are only two professorships in psychiatry, one at the University of Edinburgh and the other at the University of London; the latter has been vacant since 1st January, 1940. It is reasonable to expect that, in the course of time, as suitably qualified persons become available, other schools will establish chairs in the subject.

(d) Since the investigation of patients by a psychiatrist is often a somewhat complicated and difficult task, and teaching normally has to be given to small groups of students, the staff of the department will have to be large.

(e) There should be a reasonable sharing of staff between the mental hospitals of the area and the department of psychiatry of the teaching centre. Such a sharing of staff will be beneficial in several ways. It will help to break down the isolation of the mental hospitals from the general hospitals service. It will prevent a large and unnecessary duplication of staff. It will facilitate the development of comprehensive psychiatric services for the area. It will help to spread through these services the university influence, steadying ill-regulated enthusiasm, yet working against stagnation; and it will make for adequate clinical facilities for both undergraduate and post-graduate teaching in psychiatry.

(f) The department should be provided with a good staff of psychiatric social workers. These workers are indispensable for any psychiatric work that is not restricted to individual psycho-therapy, and they are valuable contributors to the necessary work of educating the community in matters of mental health.

(g) A prime need from the teaching point of view is a fully organized out-patient department in at least one of the general teaching hospitals, with an adequate number of patients and a large enough staff for the teaching of the students to be conducted unhurriedly.

(h) It has been submitted in evidence that the department of psychiatry should have charge of beds. In support it has been claimed that such beds are an advantage as allowing the psychiatrist the means for further investigation, when necessary, of patients seen in the out-patient department, and, further, as providing for the students the opportunity to "follow-through" cases. Whether the department should have beds in the teaching hospital, or instead should maintain close liaison with the psychiatric institutions of the local authority, will probably depend upon local conditions. In any case, neither the clinical nor teaching work of the psychiatrists in the wards of the teaching hospital should be limited to such beds as may be allocated to the department. The services of the psychiatrist should be used fully by the other clinicians in the treatment of their patients and the psychiatrists should be entitled to teach students on their

patients when desirable. Such co-operation will contribute to the better understanding and treatment of patients, and will make available for the instruction of students many important and interesting cases.

(i) Co-operation with the paediatricians is specially important and has already been mentioned in the chapter on child health. The relations between psychiatry and social medicine must also be close. Both branches have a strong interest in prevention; and a psychiatrist cannot fail to take account of social factors, any more than a worker in social medicine can avoid taking account of psychological factors. There is much common ground between psychiatry and neurology, and medical students would profit if they received tuition and experience in both concurrently; the "exactness" of the latter is a valuable counterpart to the handling of broad and complex human issues stressed in the former. The essential lesson about the relation between physical and mental data can be taught effectively in a department in which neurology and psychiatry are linked; but there are historical and other reasons for doubting whether a combined department of this sort will be the general rule. Where practicable, it can ensure that students are taught to recognize the part that the nervous system plays in "nervous" illness, and how necessary it is to make a painstaking assessment of both physical and psychological data.

— TEACHING REQUIRED BY UNDERGRADUATE STUDENTS.

8. Every medical practitioner must be fully alive to the importance of the psychological factors in health and sickness. A practitioner who is in general practice needs to have had enough training in psychiatry to enable him (i) to recognize and refer appropriately people with disorders which require special psychiatric attention (for example, the insane, the impending suicide, the potentially delinquent defective, the case of gross mental deficiency), (ii) to recognize and deal sensibly with the psychological aspects of physical illness and with the mild, easily remediable forms of mental and nervous ill-health, (iii) to know whether or not he is able to give sound and useful advice on the social, industrial, eugenic, sexual and other aspects of preventive psychiatry about which he is consulted by his patients. The questions to be considered are how and where the medical student is to be given the training that will give him this measure of competence if he goes on to general practice.

9. It is undesirable for a student to be brought into contact with psychological illnesses until he knows something about the psychology of normal healthy persons. He should, therefore, be given a short elementary course of normal psychology during the pre-clinical part of his training, in association with the course in physiology.

10. There has not been unanimity of view among our witnesses as to whether it is better for this course to be given by a medical or non-medical psychologist. Probably the ideal teacher is one who has had a sound training in normal psychology and has had some experience of mental illnesses; but it is not desirable to lay down a hard and fast rule. The important thing is to select someone who will give good teaching on normal psychology, on lines that are broadly conceived, that avoid sectarian disputes, and will eventually serve medical ends. We agree with this statement made by Dr. Aubrey Lewis in his memorandum of evidence:—"It is more important that the teaching in psychology should be relevant to clinical practice, stimulating, and likely to leave an impression on the future practitioner's outlook than that it should be very erudite. It will often therefore be better for it to be given by a well-informed psychiatrist than by a non-medical psychologist, but also

better that it should be given by an alert, critical, learned non-medical psychologist, alive to the modern applications of psychology to the daily life of human beings, than by a clinician who has only the dry-as-dust laboratory psychology of two decades ago, . . . ”

11. If during the clinical part of his training the student is to acquire the right attitude to psychological factors, the training he receives in psychiatry must be interwoven with the rest of his clinical experiences. He must realize that in the case of psychiatry, as in the case of social medicine, a good working knowledge is an essential part of the equipment of every medical man who deals with patients. It follows, again as in the case of social medicine, that the teaching of psychiatry should not be given solely by the specialists in the subject. The other clinicians of the teaching centre have important obligations. They can exercise a powerful influence on the attitude of mind of the students in several ways:—by recognizing the existence of the mental factors and directing the attention of their students to them in the ordinary course of their teaching, by enlisting the help of the psychiatrist whenever his advice seems desirable in the care and treatment of their patients, and by allowing the psychiatrist freedom to teach on patients in their wards.

12. The training for which the specialist psychiatrists will be responsible will include a few systematic lectures which might well be given during the introductory clinical course, but the major, and most important part, will consist of practical demonstrations, and, particularly, of supervised case-taking and other clinical work by the students. For our purpose it is necessary to consider only the arrangements for the demonstrations and supervised case-taking and other clinical work. Taking the needs of the intending future practitioner as the guide, it is clear that this part of the training must include the following:—

(a) *Teaching of neuroses, mild psychoses and child psychiatry in the out-patient departments of the teaching hospital or hospitals.* This part is much the most important and should be compulsory for every student. The out-patient department is a particularly valuable centre for teaching, because there an opportunity is afforded for the discussion and demonstration of those early mental and nervous disorders that are most commonly met in general practice. It would be desirable for a student to obtain this part of his training in psychiatry during the period in which he is holding a medical clerkship.

The child guidance clinic should provide the student with some understanding of the psychological side of physical illness in children, and give him an insight into the social and psychological aspects of delinquency, neurosis, and other signs of failure in healthy mental growth and adjustment. Nowhere else can he be reminded so often that he is concerned with the healthy as well as with the ill, and that social treatment is of the first consequence. It should also bring him into contact with milder grades of mental defect and with educational disabilities such as word-blindness. Possibly in some cities, the psychological problems of children will not be dealt with in a single centre; the school, for instance, may have an educational clinic providing treatment for educational disabilities and vocational advice for school leavers; the paediatric department of the teaching hospital may have its own psychiatric consultant; and the psychiatric department its therapeutic children's division. Even if this specialization of services be avoided there may still be an educational clinic at the school and a children's psychiatric clinic at the hospital. The student would, in that case, profit by having some acquaintance with what is done at both, but the difficulty of fitting such attendances into his syllabus will probably make it desirable that he should

get his experience of child psychiatry wholly at the hospital. If there is only one place where all the psychological problems of children are dealt with, so much the better for the breadth of the student's training, and especially for his grasp of the preventive side of psychiatry.

(b) *Teaching on the psychological aspects of patients in the general wards of the teaching hospital.* This teaching will be complementary to that given in the out-patient departments.

(c) *A few demonstrations at a mental observation ward by experienced teachers associated with such units.* Where observation wards exist, good experience in the treatment of acute mental illnesses can be gained from patients passing through them. Many of these patients never reach the mental hospitals.

(d) *A very few demonstrations at a mental hospital and a mental deficiency institution.* A student needs only a limited acquaintance with cases of mental deficiency and chronic mental disorders; sufficient to enable him to distinguish mental deficiency in an infant, and to recognize the gross forms of mental disorders. He also needs knowledge of the legal aspects of both mental deficiency and mental disorders, and enough information about the conduct of hospitals and colonies for the insane and the defective to enable him to deal with the worries and fears of patients' relatives.

13. Sometimes the view has been expressed that the intimate topics which a psychiatrist may have to discuss with a patient preclude the interview being conducted in the presence of students. The psychiatrists among our witnesses have assured us that their own experience does not support this view. There is a group of cases, for example patients receiving psycho-therapy, that must be conducted in strict privacy; but normally, given experience, tact, and judgement, a psychiatrist can elicit the main facts from a patient interviewed in the presence of students, and thus can show students by example how to talk to patients on questions of psychiatric importance.

14. Should any teacher of psychiatry feel unable to interview his patients before an audience, even a small one, he can still teach his students in the out-patient department, by requiring them to make their examination first, and then checking or amplifying their findings at separate interviews at which they are not present. This method, however, is less satisfactory.

15. Most psychiatrists will probably feel it necessary to have only a few students present at any interview, although this feeling is not unanimously shared. In consequence a large staff will be necessary to ensure that every student receives adequate out-patient experience. Suitable members of the staff of mental hospitals in the locality might assist in the conduct of these out-patient sessions.

TRAINING OF SPECIALIST PSYCHIATRISTS.

16. As we have pointed out already, the major and most urgent need is the training of specialist psychiatrists and particularly of teachers of psychiatry. This problem is bound up with the question of the training of specialists generally, a question with which we deal later (see chapter 17); but, in view of the special urgency for more teachers of psychiatry, it is desirable for us to anticipate in some respects our discussion of that question in so far as the production of specialist psychiatrists is concerned. If psychiatry is to acquire the same status as other branches of Medicine and the right kind of practitioner is to be engaged in it, psychiatrists must be included in any arrangements that may be made for the recognition of specialists, and the post-graduate training and experience that intending psychiatrists are required to obtain must be comparable with the requirements for specialists in other branches.

17. At the present time various examining bodies award post-graduate diplomas in psychological medicine. The standard of these diplomas varies, but generally is low. In most cases the clinical requirements can be met in six months spent at almost any mental hospital. In view of the principles that are widely agreed regarding the post-graduate training and experience necessary for specialists, it is clear that a much higher standard and wider range of experience should be demanded before the status of specialist psychiatrist can be acquired, than is demanded nowadays for any of the diplomas of psychological medicine.

18. To be comparable with the post-graduate training and experience likely to be required for specialists in other branches of Medicine, the training and experience for intending specialist psychiatrists will have to provide a good experience of general medicine and embrace all aspects of psychiatric knowledge and practice. It will have to be obtained in approved institutions and to be of four or five years duration. The need for the psychiatrist to be well-grounded in general medicine is obvious in view of the inter-relation of the physical and mental factors in both health and sickness. Such grounding is as necessary for the psychiatrist as is a good grounding in general surgery for the surgeon in one of the surgical specialities. It might well involve attachment to a department of general medicine for a period of six months to a year, excluding any period spent in this department as a pre-registration house-officer (see chapter 15).

19. Insistence upon every specialist psychiatrist, whatever his particular field of interest, having an all-round training in psychiatry is necessary for the development of the general body of psychiatric knowledge and practice, and for the sound progress of the various divisions of the subject. Such training should include clinical experience in a mental hospital, psychiatric work in adult and child out-patient departments, experience in mental deficiency, both within and outside special hospitals, of industrial psychiatry, and of forensic psychiatry. In view of the intimate relationship between psychiatry and neurology, it should also include experience of neurology and neuropathology.

20. This post-graduate training and experience will have to be obtained in hospitals specially selected for the purpose and capable, on account of the high standard of their staffing and other facilities, of providing the requisite supervision and teaching. It is reasonable to expect that in course of time, as the various medical teaching centres throughout the country build up their departments of psychiatry, each of these centres will participate in the production of specialists in psychiatry. Pending these developments, it will be necessary to look to Edinburgh and London as the principal centres.

21. Edinburgh has for long been an important centre of psychiatric work. The teaching of psychiatry has been a feature of their undergraduate medical teaching during the past 120 years. The University, in co-operation with the authorities responsible for the mental health services in Edinburgh and the south-east of Scotland, should have no difficulty, if granted adequate financial support, in providing for the training of a larger number of specialist psychiatrists than it has trained in the past.

22. In addition to the facilities at certain of the London teaching hospitals, the mental health services for which the London County Council are responsible offer unique facilities for post-graduate training and research. Before the war these services included 21 mental hospitals and institutions for the mentally defective, with a total of some 34,000 beds, and 9 mental observation units (with a total of 438 beds) attached to general hospitals maintained by the Council.

23. One of the Council's psychiatric hospitals, the Maudsley Hospital, occupies a special place in psychiatric work. Its establishment was the result of a gift to the Council by the late Dr. Henry Maudsley, a distinguished psychiatrist, to assist in the provision of a special hospital for the early treatment of cases of recoverable mental disorder, which would also serve as a centre for teaching and research. In 1915, the London County Council obtained, in a private Act of Parliament, which anticipated the provisions of the Mental Treatment Act of 1930, powers to receive voluntary patients at Maudsley Hospital. In consequence, patients have never been received at this hospital under orders for compulsory detention. The great majority of the patients are early cases and the recovery rate has been most satisfactory. Adjacent to the hospital is the Central Pathological Laboratory which serves as a co-ordinating centre for research in the pathology of mental disease undertaken at all the Council's mental institutions.

24. The hospital is a post-graduate school of the University of London. Two professorships have been established there, one (which is vacant at the present time) in clinical psychiatry and one in the pathology of mental diseases. Special care has been taken in the selection of staff and a high standard of qualification has been demanded, two factors which have contributed largely to the high reputation of the hospital and the quality of the training that it has provided.

25. We have been informed by the London County Council that plans are actively in hand for the development of the teaching of psychiatry in the Council's mental health services after the war. The aim will be to make use of the vast resources and wealth of facilities available in these services as a whole. There is no reason why, with such an immense and possibly unique field to draw on, the London mental health services should not develop as the European centre of progress in psychological medicine. In view particularly of the urgent need for more well-trained teachers of psychiatry in Great Britain we attach the greatest importance to the Council's plans being implemented, in association with the British Postgraduate Medical School, at the earliest possible moment.

TRAINING OF PSYCHIATRIC SOCIAL WORKERS.

26. The selection and training of psychiatric social workers have hitherto been entirely in the hands of those controlling the Mental Health Course at the London School of Economics and Political Science, and, as a result of the stringent requirements in personal suitability, academic preparation and social experience that have been insisted upon, the number of psychiatric social workers is relatively small (just under 200) but their professional standards are uniformly high. It is very desirable that, in any future expansion of training facilities for these social workers, equal care should be taken in selection and training. In the psychiatric department of a medical school, they will provide some of the necessary instruction for the students in the social aspects of mental health.

Chapter 14.

OBSTETRICS AND GYNAECOLOGY.

1. The importance to the community of an efficient maternity service has never been in doubt, but in recent years a great concentration of public interest has brought about many improvements. Opinion has become very sensitive to any defect in this service. The Departmental Committee on Maternal Mortality and Morbidity (Report 1932, page 136) identified one of the defects as "a serious lack of facilities for the training of students". The Royal

College of Obstetricians and Gynaecologists in evidence to us stated that "notwithstanding the recognized improvement the standard of midwifery practice in many parts of the country is low," and that "additional facilities for the training of students, both graduates and undergraduates, would do much to raise it." Before those facilities can be defined, a survey must be made of the changes which have taken or are taking place in the maternity service of the country.

2. The primary function of a maternity service is to guide the mother safely through pregnancy, labour and the puerperium. To this must be added the equally important function of securing the foundations of child health. A great deal of evidence has accumulated to show that the efficient care of expectant mothers can reduce the incidence, not only of premature births and still-births, but also of infant, and especially neo-natal, mortality, and can do much to ensure that the child has the best possible endowment of body tissues to form a protection against the diseases of later life. Several of the dangerous illnesses of the new-born can be attributed to faulty dietetic and hygienic conditions in the mother during pregnancy.

3. The need for an intimately associated gynaecological service requires little further justification than the fact that in most gynaecological departments more than sixty per cent. of the ward patients are admitted for the treatment of disabilities resulting from pregnancy and childbirth. The association of obstetrics and gynaecology in the same clinical division will help towards the prevention of such disabilities. Throughout the past twenty years there has been a notable reduction in the more serious forms of disability resulting from childbirth, but there is still a wide field for improvement.

THE ORGANIZATION OF THE MATERNITY SERVICE.

4. Except in cases of sudden or urgent necessity, only two classes of person in Great Britain, namely doctors and midwives, are legally permitted to assume responsibility for attending women in childbirth. The doctors, whether specialist obstetricians or general practitioners, are entitled to attend all types of case, normal and abnormal. The midwives are specialists in normal midwifery. They are permitted by law to act without a doctor in any normal case, but they are required to summon medical aid whenever an abnormality occurs in any patient for whom they are responsible. Their training nowadays is more comprehensive and thorough than formerly and their practice is subject to careful supervision.

5. During the last twenty years maternity work has tended to pass more and more into the hands of the obstetricians and the midwives. To some extent this trend has been due to an increase in the number of confinements taking place in institutions; it has also been due to the better organization, in recent years, of the services of obstetricians and midwives for the care of women having their confinements at home.

6. The domiciliary midwifery service, which is the part of the maternity service catering for women who have their confinements at home, was reorganized shortly before the war under the Midwives Act, 1936, which applies to England and Wales, and the Maternity Services (Scotland) Act, 1937. The former Act made it obligatory upon every local supervising authority* to secure that the number of certified midwives employed whole-time and available in its area for attendance on women in their own homes as midwives or maternity nurses is adequate to the needs of the area. Such midwives may be employed by the authority itself or by welfare councils or

* The local supervising authorities under the Midwives Acts are the county councils and county borough councils and such other local authorities as may have been constituted local supervising authorities.

voluntary organizations in the area. The Maternity Services (Scotland) Act, 1937, made similar provision in a slightly different way. It instructed "every local authority to make adequate arrangements for the provision to women, by whom or on whose behalf application is made; of the services in their own homes of certified midwives before and during childbirth and from time to time thereafter during a period of not less than the lying-in period, and for that purpose the authority may arrange with voluntary associations employing midwives or with midwives in private practice, or they may themselves employ midwives".

7. The statutory position of obstetricians and of general practitioners in the domiciliary service differs in the two countries. The Maternity Services (Scotland) Act established, in addition to the service of domiciliary midwives, a service of general practitioners and also a service of obstetricians. The aim of the former service is to secure that every woman, who is not an in-patient in a hospital, can obtain medical examination and treatment during pregnancy, and medical supervision during childbirth and the post-natal period. The object of the latter service is to secure that an obstetrician can be obtained for advice and assistance "where necessary and practicable". In a memorandum relating to these services the Department of Health for Scotland has stated that at all stages of pregnancy, labour and the post-natal period any general practitioner working under the Act "shall give such treatment as is within the competence of a general practitioner, for all conditions requiring it". The Department recommended that the practitioner should resort as often as may be necessary to the assistance of an obstetrician and, in particular, that in the course of labour he should limit himself to "minor manipulative or instrumental interference".

8. Corresponding services were not set up in England and Wales by the Midwives Act, 1936. However, many of the local authorities have provided a service of obstetric consultants in virtue of other statutory powers, and in 1938 the Ministry of Health recommended every local supervising authority (i) "to draw up a list of practitioners who notify themselves as willing to be called in by midwives in an emergency", (ii) to set up a local medical advisory committee to scrutinize this list from time to time and to make such recommendations as it considers necessary for the purpose of securing and maintaining a high standard of obstetric practice on the part of the practitioners included on the list, and (iii) to instruct midwives that in summoning medical aid in emergencies they should, save in exceptional circumstances, call one of the practitioners on the list. It is understood that for various reasons these recommendations have not been adopted.

9. What then is to be the scope of the general practitioner's association with the maternity service in the future? This question is most conveniently considered in three parts, namely in relation to antenatal work, the conduct of labour and the post-natal period:—

(a) *Antenatal work.* The general practitioner, even though he may not have had post-graduate training in obstetrics, should be well qualified to guide an expectant mother through pregnancy, to keep her, by his advice and supervision, in the best possible state of health and to recognize the earliest signs of danger. He should be able to appreciate at once when specialist advice or institutional treatment is necessary. He should be aware of the importance of supervision during the antenatal period as a factor in infant welfare. Whether the confinement is to be conducted by a midwife on her own responsibility, or by the general practitioner assisted by a midwife acting as a maternity nurse,* it is very desirable in the

* A midwife when acting as such has full responsibility for the care of her patient. When acting as a maternity nurse she is the assistant of a doctor, the latter being in charge of the patient.

patient's interests that doctor and midwife should co-operate closely from as early in the pregnancy as possible. The parts which each should play in the antenatal care and supervision of the patient are complementary. Although the midwife has had considerable training in the care of pregnant women, she has not had the basic training in the principles of general medicine and surgery that would enable her to replace a medical practitioner in this department of the maternity service. On the other hand there are matters concerned with arrangements for the confinement on which the midwife is in a better position than the doctor to give advice, and the midwife's close association with her patient for as long as possible during pregnancy provides the midwife with the best opportunity of winning the patient's complete confidence, a factor which may be of the greatest value at the time of her confinement.

(b) *Conduct of labour.* In the conduct of labour, the pupil-midwife has more technical experience during her training than the medical student, and it would be neither wise nor economical to encourage competition between midwife and medical practitioner for the care of normal labour. The conduct of a normal confinement is the primary and essential obligation of the midwife to the community. The medical practitioner has many others which may be both urgent and exacting.

Under existing conditions any general practitioner is entitled to respond to a call from a midwife for assistance in the conduct of a confinement owing to the occurrence of an abnormality. In a memorandum on "A National Maternity Service" published in January, 1936, the Council of the Royal College of Obstetricians and Gynaecologists expressed the view that "the student's training, which is the only obstetric experience the newly-qualified practitioner has received, cannot equip him to assist the midwife in difficulties that may urgently call for the judgement and experience he cannot possess". The College reaffirmed this view in its evidence to us. While the undergraduate training of a medical student should fit him to conduct efficiently cases of normal labour, and to recognize when specialist advice or institutional treatment becomes necessary, it must be recognized that it does not and cannot fit him to deal with abnormalities. In other words, a general practitioner should not deal with abnormal obstetric conditions, beyond possibly those involving only "minor manipulative or instrumental interference", unless he has obtained additional experience by holding post-graduate appointments in maternity hospitals or departments.

(c) *The post-natal period.*—The care and supervision of nursing mothers is a matter of general medicine, except when abnormal conditions necessitate the services of a gynaecologist. A general practitioner should be qualified to exercise general care and supervision in normal cases and to recognize promptly the need for specialist advice or institutional treatment. He should also be able to give efficient care to the child from the moment of birth and to know when the assistance of a paediatrician is necessary.

10. In his daily work the general practitioner will have many clinical problems in which there may be either a basic gynaecological lesion causing disability and even danger, or a complaint of symptoms which may appear to involve the pelvic organs but where the essential fault lies elsewhere. Overwork, over-anxiety, or faulty hygiene may have led the patient to describe her ailment in terms of pelvic discomfort and even functional irregularities of the reproductive organs. On the other hand, a complaint of vague pelvic symptoms may be due to the patient's disappointment that she has failed to conceive. The practitioner must be able to assess the essential factors in such cases and to secure that basic lesions of the pelvic organs are accurately diagnosed, by resort to consultant advice where necessary, and are efficiently treated either within the scope of general practice or in an appropriate institution.

ORGANIZATION OF UNDERGRADUATE TRAINING IN OBSTETRICS AND GYNAECOLOGY.

11. The clinical training of undergraduate students in obstetrics should be closely related to their training in gynaecology. Preferably the two departments should be staffed by the same group of teachers. The two subjects are so closely related that separation may disturb perspective and lead to a great deal of overlapping. The General Medical Council has recommended that the training in obstetrics and gynaecology should be a continuous course of six months' duration, that the hours of clinical instruction should be so allotted that at least two-thirds are given to obstetrics, including ante-natal care and infant welfare, and that the course should include a two months' period of residence in a maternity hospital or department, during which the student should devote himself exclusively to clinical instruction in obstetrics and the hygiene of infants.

12. The evidence received by us supports the view that a course as advocated by the General Medical Council is necessary even though in future general practitioners may refrain from dealing with abnormal conditions unless they have had adequate post-graduate training.

(a) Training in obstetrics,

13. Owing to a serious lack of facilities, many medical schools have not been able to comply fully with the recommendations of the General Medical Council as they apply to training in obstetrics. The lack has been most pronounced in respect of the conduct of an adequate number of cases of labour by students while they are resident pupils in a maternity hospital or department. Some medical schools have even been unable to arrange for their students to be resident pupils for two months. The number of students in the school may have been too large for the facilities in locally available maternity hospitals or departments, or the governing body of the hospitals may have been unwilling or unable to incur the expense of building suitable residential accommodation for students. Steps should be taken to secure that every undergraduate medical teaching centre is able to provide every one of its students with such a period of residence.

14. Hitherto, a considerable number of students have been unable to secure attendance during their training on 20 cases of labour, the minimum number recommended by the General Medical Council. Moreover, there has been considerable laxity in the certification of attendance on cases. It is a fairly common practice for two students to receive credit for attendance on the same patient. In some circumstances two students may acquire adequate clinical experience on the same patient; but sometimes the multiplication of certificates has been allowed to go up to four or five students in respect of one case. The underlying cause of this irregularity may have been too many students for the available clinical facilities, or difficulty in meeting the requirements of medical students and pupil-midwives in the same teaching hospital.

15. The following arrangements would improve the training of medical students in the conduct of labour:—(i) not more than one person, being either a medical student or pupil-midwife, should be allowed to receive credit for attendance at a confinement, (ii) each student should conduct an adequate number of cases in a teaching hospital under the careful supervision of a member of the staff and of a competent midwife-teacher, (iii) in such cases the student should be in close attendance on the patients from the beginning to the end of labour. Too often a student is summoned to the labour ward when the birth of the child is imminent; his knowledge of labour and of the patient's

reactions at different stages suffers in consequence. Such attendance should include cases in which the labour takes an abnormal course. The highest educational value will be derived from close attendance on abnormal cases, from being present at the examinations and discussions by the obstetrician on duty, and at such obstetrical operations as may prove necessary. The extended experience of the care of the child at birth, including the treatment of asphyxia neonatorum by the hospital staff, will be valuable. For these conditions to be satisfied, a considerable expansion in the clinical facilities, for the teaching of obstetrics will be needed by most schools.

16. It also seems necessary to regulate the training of pupil-midwives in hospitals in which medical students receive their obstetrical training. In those European countries in which the maternity services have achieved the highest standards, the centuries-old tradition has been to train medical students and pupil-midwives in different hospitals. In Great Britain it has frequently been the practice to train both classes in the same hospital and the resultant conflict of claims on the clinical facilities has usually gone in favour of the pupil-midwives. The governing bodies of the hospitals have been inclined to support the interests of the pupil-midwives, because the nursing services of the hospitals have been carried out by these pupils under the direction of a relatively small fully-trained staff.

17. In view of the obligations of a teaching hospital in respect of the training of medical students, pupil-midwives should not be permitted to conduct deliveries in such a hospital as part of their course of training, unless the total number of confinements taking place in the hospital and available for teaching purposes is such that, after each student has attended the prescribed number of deliveries, there is a sufficient surplus to permit the hospital to qualify as a training school for pupil-midwives. There would be no objection, so far as the training of medical students is concerned, and possible advantages might accrue to the hospital, if arrangements could be made for parts of the pupil-midwife's training, other than the conduct of the deliveries (for example, antenatal work and the nursing of lying-in women) to be conducted in the teaching hospital, the remainder of the training being given in an institution that does not train medical students.

(b) Gynaecology

18. The range of clinical experience required by a medical student in gynaecology is clearly defined and there is general agreement concerning it. The student should be trained in the technique of gynaecological examinations, in securing specimens of discharges and in the simpler examination of these discharges. Bi-manual examinations may be difficult for him, and it is important that he should have an opportunity of examining a sufficient number of patients under anaesthesia to enable him to establish a high standard of reporting on the pelvic organs. These examinations may be secured among the minor cases on operating days, or at sessions arranged for that purpose. From these specially arranged cases, he should develop his examination technique among the more easily examined patients at the out-patient department. It is essential that he should develop an efficient technique in this branch with a view to the accurate post-natal care of maternity cases.

19. Advantage should be taken of the opportunities for linking the training in gynaecology with that in psychiatry and social medicine. Especially in connexion with out-patients of the gynaecological department, there is ample opportunity to direct the students' attention to the psychological background which is behind many pelvic complaints, particularly in those cases in which the organic lesion may be very slight: there are also many occasions when it is possible to emphasize the influence on her disabilities and treatment of the patient's home conditions and personal obligations.

20. Attendance in the gynaecological operating theatre should not be more than is necessary to allow a student to secure a picture of the most common types of gynaecological operations. It is a fault in many medical schools that such attendance figures too prominently in the training. Students will gain much more valuable experience by seeing at the "follow-up" clinics patients who have been treated in the wards.

CLINICAL FACILITIES AND ACCOMMODATION.

21. In its evidence the Royal College of Obstetricians and Gynaecologists attached importance to the whole of the six months' clinical course in obstetrics and gynaecology being given, whenever possible, in a single institution, and in association with the training in medicine and surgery. We are in general agreement with this view and consider that it should be the guide in deciding upon the constituent hospitals and services of any medical teaching centre.

22. On account of inadequacy of facilities in their main teaching hospitals, and with the object of securing that each of their students should attend 20 cases of labour, some medical schools, particularly in London, have utilized local authority and voluntary non-teaching hospitals. A common practice has been to send two or three students at a time to such hospitals for a fortnight or three weeks during which period the students attended as many confinements as possible. Usually the training of the students during this time was undertaken by members of the staff of the hospital to which they were sent, these clinicians normally not being on the staff of the medical school or otherwise associated with the students' training. Just before the outbreak of war nine of the London medical schools had made arrangements with the London County Council for facilities on these lines at ten of the Council's hospitals.

23. The assistance thus provided by these local authority and voluntary non-teaching hospitals has unquestionably proved invaluable in meeting a serious deficiency in the facilities for medical students. Nevertheless, the arrangements, while the best that could be made at the time, do not furnish a guarantee that the student's practical experience in obstetrics will be adequate. The organization of the clinical facilities required by a medical school on the basis of a teaching centre, as discussed in chapter 3, provides a more satisfactory means of securing adequacy. In deciding the constitution of such a centre, the volume of maternity work should be a matter to which special attention is paid. The hospitals and services forming constituent parts of the centre should among them have a volume of maternity work that ensures the number and variety of cases necessary for the proper training of all the students attending the centre.

24. A training centre to which 100 new students a year are admitted to the clinical part of the course should provide not less than 100 obstetric beds and not less than 50 gynaecological beds for teaching purposes, and should include a domiciliary midwifery service. The estimate of the number of obstetric beds has been based on the following assumptions (i) that about 25 of these beds will normally be reserved for antenatal cases and 75 beds will be available for lying-in mothers; (ii) that with this number of available beds it will be possible to arrange for each student to attend approximately 15 cases of labour in hospital; (the cases credited to the student should not be limited to those he is able to conduct personally under supervision; he will profit by attendance on a few cases in which operative delivery may have become necessary); and (iii) that the remaining cases of labour that a student has to conduct to comply with the recommendations of the General Medical Council can be attended in the patients' own homes through the domiciliary midwifery service of the centre. If as a result of the decline in domiciliary

midwifery work in urban areas enough cases in the patients' own homes cannot be obtained to satisfy assumption (iii), the number of obstetric beds provided in the teaching hospitals will have to be increased accordingly.

25. We have assumed that only a small part of the training will be in domiciliary midwifery work, partly because of the steady decline of such work in the main teaching centres, a decline that seems likely to continue, and partly because experience of domiciliary midwifery, though it may contribute to a student's knowledge of social conditions, is of limited value in improving his knowledge and skill in obstetrics. There is little to be learnt from conducting a considerable number of normal labours in tenement houses. Often the supervision of this work is inadequate, and the accurate training a student has received in the hospital labour ward may become very diluted.

26. The students themselves now appear to find this part of their undergraduate experience less attractive than did their predecessors of half a century ago. They now work to a much more rigid and crowded time-table and they find that they may miss what appear to be more valuable opportunities of clinical experience in hospital while they are "on the district", either attending a labour or visiting their lying-in patients. It is certainly important that the student should learn how to improvise and how to conduct a labour satisfactorily in an ill-furnished house, but this experience need not be extensive and should not replace any considerable part of the more valuable training which the hospital labour ward can provide. In some hospitals in Scandinavia and in the United States of America this form of improvisation is demonstrated by arranging a small room in the hospital on the pattern of a humble domestic apartment.

27. The period of residence in a maternity hospital or department gives the proper opportunity for the study of the progress of the new-born, and essential experience of the difficulties in the early stages of lactation. The clerking duties of each student should include the care of the babies. This study of child life will be continued by attendance at the infant welfare clinics conducted at the hospital.

28. In addition to adequate provision for antenatal and lying-in patients and for gynaecological cases on the scale mentioned above, there should also be nursery accommodation of a high standard, including special sections for premature babies and for infants suffering from infectious conditions, antenatal clinics, a post-natal service conducted in close association with the department of child health, a general gynaecological out-patient department and gynaecological "follow-up" clinics. In the hospital or hospitals in which students spend two months as resident pupils, there should be adequate, well-designed residential accommodation for the students either in, or immediately adjacent to and with corridor communication with, the hospital. Further, adjoining the labour wards there should be adequate waiting-room accommodation for students on duty.

29. Ideally, all the accommodation required by the division for teaching purposes, including the obstetrical and gynaecological beds, should be in a single hospital. This hospital might be the parent teaching hospital or an associated hospital, general or special, of the teaching centre. Such a concentration in one hospital may not be possible in many centres. Instead it may be necessary to distribute the teaching accommodation and activities of the division over two or more hospitals. In these cases it is desirable that the headquarters of the division should be at the hospital which provides the largest number of obstetric and gynaecological beds for teaching purposes, even though this hospital is not the parent teaching hospital, and for the professor,

while generally directing teaching and research in obstetrics and gynaecology throughout the teaching centre, to make this hospital the principal centre of his own work.

Chapter 15.

COMPULSORY PRE-REGISTRATION HOUSE APPOINTMENTS.

1. There has been enthusiastic support among our witnesses, including the representatives of medical students, for the proposal that, in future, entry into independent medical practice should be preceded by a compulsory period of approved and responsible clinical practice under supervision. Minor differences of opinion exist concerning the exact nature of the clinical experience that should be required, a few dissenting from the view of the large majority that the experience should be obtained entirely through resident appointments in approved hospitals.

ARRANGEMENTS FOR HOUSE-APPOINTMENTS BEFORE AND DURING THE WAR.

Before the War.

2. Under the existing provisions of the Medical Acts, any medical student on obtaining a registrable qualification from one of the licensing bodies, is entitled, on payment of the registration fee, to be admitted to the Medical Register and to go forthwith into independent practice. Before the war probably about one-half of the medical students qualifying in any year went from their undergraduate training straight into general practice without acquiring any additional practical experience. The other half, after they had become registered medical practitioners, held for varying periods junior resident appointments as house-officers in the hospitals in which they had been trained or in other hospitals. Usually those who intended to become specialists then proceeded to more responsible hospital appointments, while most of the remainder went into general practice, in many instances beginning as assistants to general practitioners. The group that did not hold house-appointments usually included students of the lower degrees of ability, who, in the interests of their future patients, were in most need of the experience and discipline derived from hospital appointments. The group also included, however, some well-qualified students who, on account of their own or their families' financial circumstances, felt unable to take advantage of the benefits offered by post-graduate experience in hospitals.

3. An indication of the proportion of students who, before the war, held house-appointments after registration, is given in the figures set out below. These figures were obtained from the analysis, described in Appendix C, of medical practitioners admitted to the Medical Register in the five years 1933 to 1937 inclusive. In those years 9,207 practitioners were registered. Approximately 70 per cent. were registered after completing the whole course of training at medical schools in Great Britain; particulars of these practitioners have been analysed. In the main, information concerning the holding of house-appointments has been obtained from the Medical Directory for 1943. Information published in this directory is derived from the medical practitioners themselves and it is possible that in some cases a house-appointment that had been held may not have been mentioned. Nevertheless, in the

light of statements made in evidence by the representatives of medical schools, the resulting figures seem to provide a useful picture of the pre-war position:—

Registered medical practitioners who qualified in 1933-37 after taking the whole medical course of training in Great Britain and who held one or more hospital house-appointments after registration.

Where trained	Total Number			Number and percentage who held house-appointments					
	Men	Women	Total	Men		Women		Total	
				No.	Per cent.	No.	Per cent.	No.	Per cent.
London Medical Schools	2,499	324	2,823	1,456	58.3	213	65.7	1,669	59.1
Universities in English provinces and Wales	1,195	199	1,394	604	50.5	101	51.0	705	50.6
Scottish Universities	1,751	241	1,992	802	45.8	111	46.1	913	45.8
Scottish Extra-Mural Schools*	270	15	285	48	17.8	2	13.3	50	17.5
Total—Great Britain	5,715	779	6,494	2,910	50.9	427	54.8	3,337	51.3

* These figures do not include practitioners, numbering 152, who, possessing a continental medical qualification, obtained the Diploma of the Scottish Triple Board after 1 year's course of training at an approved institution or 162 persons who obtained the diploma of the Scottish Triple Board, but who had not applied for admission to the British Register by November, 1943.

Many of those who held a house-appointment held more than one such appointment.

During the War.

4. It has been estimated that during the war approximately 94 per cent. of medical practitioners admitted to the Medical Register have held after qualification a hospital appointment for a period of at least six months. The remaining 6 per cent. includes aliens, Dominion nationals, married women and a small number of practitioners who obtain permission to undertake such appointments as those of junior demonstrators in university medical schools, ship's surgeons, assistants in general practice and research posts under the Medical Research Council.

The remarkable increase in the proportion of practitioners holding house-appointments has occurred as a result of war-time arrangements and regulations. The posts available in voluntary and municipal hospitals have been classified as follows:—

“A posts” are those whole-time resident house-appointments at voluntary and municipal hospitals which are or can be occupied by practitioners without previous experience.

“B posts” are those whole-time house or hospital posts, usually but not always resident, which cannot be occupied by practitioners without previous experience, i.e. senior house-surgeons and physicians, casualty officers, resident surgical and medical officers, registrars and other officers intermediate between the junior house-officer and a member of the staff, or in the case of the municipal hospital, intermediate between the junior house-officer, if any, and the medical superintendent.

“B posts” are sub-divided into two groups:—

(a) B 1 posts are those B posts which are within the hospital's senior establishment. At a voluntary hospital the typical posts are those of

resident surgical officer, resident medical officer, registrar, and chief assistant. At a municipal hospital the senior establishment comprises those B appointments with a tenure of more than one year, and carrying with them a salary of £350 a year with emoluments, or more.

(b) B 2 posts are those B posts not within the senior establishment, that is, those B posts not included under B 1.

5. Under the Central Medical War Committee's recruitment arrangements the tenure of the junior posts (i.e. the A and B 2 posts) has been limited to six months in the case of practitioners who are liable for service under the National Service Acts. Since the introduction of compulsory recruitment of practitioners to serve in a medical capacity with H.M. Forces, the Services have not accepted practitioners within the first six months after qualification.* During that period the newly-qualified practitioners have been urged by the Central Medical War Committee to extend their clinical experience, preferably by becoming junior house-officers in a hospital. In July, 1940, the Government, on the recommendation of the Central Medical War Committee, authorized the Minister of Labour and National Service to exercise his powers under the Defence Regulations and to direct medical practitioners to (inter alia) civilian hospital appointments. Thenceforth, practitioners of military service age were informed on qualification that if they did not obtain a hospital post within three months they would be referred to the Ministry of Labour and National Service with a view to their direction to a hospital post. Since January, 1943, the period during which a hospital post must be obtained has been reduced from three months to one month. Practitioners liable for military service are recruited for service with H.M. Forces on completion of a six months' tenure of an A post or posts unless they are appointed to a B 2 post. Similarly practitioners holding B 2 posts are recruited on the completion of a six months' tenure of these posts unless appointed to a B 1 post. Notwithstanding the war-time reduction in hospital establishments, the number of A and B 2 posts during the war has exceeded the corresponding figures in peace-time largely as a result of the Emergency Hospital Scheme.

PROPOSALS FOR FUTURE ACTION.

6. We recommend that the necessary action should be taken to require every medical student, after he has passed his final examination and before he is admitted to the Medical Register and allowed to take up independent medical practice, to serve as a junior house-officer for a period of 12 months in one or more approved hospitals. Certain aspects of this proposal are considered in the following paragraphs.

Compulsory house-appointments should be a pre-registration requirement.

7. The decision to recommend that admission to the Medical Register should be conditional upon a student having completed a period of house-appointments has been reached on administrative as well as on educational grounds. Hitherto, house-appointments have been held after admission to the Register. While doubtless it would be possible to make the compulsory holding of such appointments a probationary requirement following registration, it would have to be done by some such measure as an amendment of the law to the effect that, notwithstanding anything in the Medical Acts, the names of medical practitioners could be erased from the Medical Register if they failed to satisfy the General Medical Council that they had fulfilled the conditions incumbent upon them during the probationary period. Erasure from the Register for non-compliance with probationary conditions would

* During certain periods of the war the interval has been three months.

not provide as simple or effective machinery for enforcing the requirement as the withholding of registration until the conditions had been satisfied. The work of the General Medical Council might be increased to no useful purpose, and special difficulties would probably arise in the case of students who left Great Britain after being registered but before holding house-appointments.

8. From the educational angle the nature of compulsory house-appointments is more likely to be viewed in the proper light by all concerned, the house-officers included, if these appointments are held before the status of a registered medical practitioner is acquired. It is important that a person holding such an appointment should be regarded as a student who is consolidating his knowledge and widening his experience and who still needs guidance and supervision. At the same time the special value of a house-appointment lies in developing in the holder a sense of responsibility. Therefore, the duties and responsibilities which a house-officer assumes within the hospital should approximate to those attaching to-day to house-appointments held in voluntary teaching hospitals by recently qualified practitioners as their first appointment after registration; but the amount of work that he is called upon to perform should be smaller. He needs adequate time for thought, for further study, and for the personal investigation of the social and environmental conditions of the patients with whom he comes into contact. The last point is particularly important because the period of pre-registration house-appointments can provide a most favourable opportunity for establishing firmly in the minds of future practitioners the habits of social medicine. The number of beds for which a pre-registration house-officer is made responsible should, therefore, be less than is customary under existing conditions. In a non-teaching hospital the number should not exceed 30 beds. In a teaching hospital, in view of the demands on the officer's time arising from the teaching work of the hospital, the maximum should be 20 beds. During the early stages of the scheme lower maxima may have to be adopted (say 25 beds in non-teaching and 15 in teaching hospitals) in order that enough appointments may be made available.

The nature of the compulsory appointments.

9. Various suggestions have been submitted regarding the nature of the appointments which a student should be required or permitted to hold during the compulsory period. One suggestion was that he should hold three appointments, each for four months, in medicine, surgery, and obstetrics and gynaecology respectively. While agreeing that during the compulsory period a house-officer should have care of both medical and surgical patients, we are not able to recommend the inclusion of appointments in obstetrics and gynaecology. In reaching this decision we have been influenced by our view of the minimum length of time that should be devoted to appointments in general medicine and general surgery. Also we have had in mind the part which the general practitioner is likely to play in the maternity service and the experience that should be required of those who undertake to treat abnormal obstetric conditions. We believe that pre-registration house-appointments in general medicine and surgery will give the general practitioner who will not deal with such abnormal conditions all the post-qualification experience that he will need for efficient participation in the maternity service. Those practitioners who propose to deal with abnormal obstetric conditions must have post-qualification experience in midwifery as house-officers in maternity hospitals or departments. To derive full benefit from these appointments, they should first have had the maturing experience of house-appointments for one year in general medicine and surgery. At the present time, a house-appointment in a maternity unit is held as a rule after the completion of appointments as junior house-physician and junior house-surgeon, and we recommend that this practice should continue.

10. Another suggestion was that a student should be required to hold a hospital appointment for part of the period, but should have the option of spending the rest of the period, say three to six months, in some other form of approved practice, for example, as a salaried assistant of a local authority's personal health service, or in a laboratory appointment, or, should health centres be established, as an assistant at such a centre. This suggestion is attractive and may, in future, demand serious consideration. At the moment we do not recommend its adoption, believing that for at least a considerable time to come, a student will derive the greatest benefit by spending the whole of the twelve months in hospital appointments.

11. An allied suggestion, less frequently made, that students should have the option of spending a part of the period in apprenticeship to a general practitioner, is not endorsed for the same reason, and also because it would present serious difficulties in the choice of suitable practitioners and the subsequent supervision of the students' work.

12. We have come to the conclusion that the most satisfactory results will be obtained if the pre-registration house-appointments are confined to the departments of general medicine and general surgery, and if six months is made the minimum period for any single appointment. A great deal of the value of an appointment is lost if the period is shorter than six months. Usually the first two or three months are spent in becoming accustomed to the work, and it is in the final three or four months that full benefit is obtained. In 1938-39, over 88 per cent. of the house-appointments available to recently qualified practitioners in the teaching hospitals of medical schools in Great Britain were of six months' duration. A few appointments were for twelve months, and still fewer (less than 4 per cent.) were only for three months. We expect that normally a student would hold one house-appointment for six months in general medicine and another for six months in general surgery. Although during these periods organized provision should be made for him to gain some further experience in the work of special departments, house-appointments in these departments, as well as in obstetrics and gynaecology, should be held after registration.

An examination not to be held at the end of the compulsory period.

13. The overwhelming consensus of opinion has been against the holding, on the completion of the compulsory period of house-appointments, of an examination, even a practical one designed as a purely vocational test of fitness for practice. It is argued that such an examination would be unnecessary, the student's knowledge of Medicine having already been tested at the final examination, and, further, that much of the value to a student of a period of supervised practice in approved house-appointments might be lost if he had the prospect of an examination before him. We agree with these views and consider that it should be sufficient for the student, when he applies to the General Medical Council for admission to the Medical Register, to submit certificate(s) to the effect that he has held the prescribed house-appointments to the satisfaction of his medical school and the hospitals concerned. The advisability of freeing the holders of pre-registration house-appointments from the burden of examinations is one of the reasons making it desirable to put an end to the practice, most prevalent in the London medical schools, of students obtaining registrable diplomas and then, while holding a house-appointment, working for a second registrable qualification, namely, a university first medical degree.

Remuneration of pre-registration house-appointments.

14. Before the war, the majority of the appointments available in hospitals outside London to practitioners as their first house-appointments following

registration carried remuneration at the rate of £50 or more a year. In London, over 60 per cent. of the appointments provided only board and lodging and of those which carried a small remuneration in addition, the rate of remuneration in a number of cases was less than £50 a year. We are satisfied that for the success of the scheme it will be necessary for holders of pre-registration house-appointments to be provided with free board and lodging and paid at a rate that is more or less uniform throughout Great Britain. We consider that a rate between £75 and £100 a year would be reasonable.

Where these appointments should be held.

15. If enough appointments are to be secured to make possible the prescribing of twelve months as the compulsory period, it will be necessary to arrange for appointments to be available in hospitals that are constituent members of medical teaching centres, and in many other hospitals as well. Before the war, about 525 general medical and surgical house-appointments were available in voluntary teaching hospitals for qualified persons who had not previously held a house-appointment. In the English provinces and Wales, women were eligible for about 86 per cent. of the appointments. In London and Scotland the percentages were 6 and 39 per cent. respectively. As already noted, the duration of almost all these appointments was six months or longer.

16. After the war the average number of persons admitted to the Medical Register may be increased to 2,000 or more a year. Under our proposals, such a number of annual registrations would necessitate about 1,000 pre-registration house-appointments in general medicine and the same number in general surgery. If the number of beds for which any house-officer is made responsible is limited to fifteen as recommended in paragraph 8 above, a slight increase might be possible in the number of appointments in existing voluntary teaching hospitals (calculating on the basis of pre-war bed complements) but, clearly, most of the necessary appointments will have to be found in associated teaching hospitals and in non-teaching hospitals. Having received assurances of the willingness of the local authorities and of the authorities of voluntary non-teaching hospitals to make provision for such appointments, we do not expect any serious difficulty in providing the number of appointments required. In some cases an up-grading of staff and a revision of existing staffing arrangements may have to be effected and it is possible that some financial assistance may be sought in meeting the cost of providing the requisite residential accommodation. In the case of students qualifying in schools in Scotland, a proportion will have to come to hospitals south of the Border, just as a considerable number of medical graduates of such schools come to England for house-appointments under present conditions.

17. Any hospital outside a medical teaching centre that is used for pre-registration house-appointments should be specially approved for the purpose by a university. In London, the University of London should act in this matter in consultation with its medical schools. Approval should be conditional upon the hospital having (i) whole- or part-time specialists on its staff, (ii) at least one senior resident medical officer who has been admitted to the Medical Register, (iii) an adequate range of cases and (iv) facilities for laboratory and radiological investigations. As soon as practicable the existence of an active and effectively used almoner's department should also be a condition of approval.

18. A university, after approving any hospital, should notify the General Medical Council and that body from time to time should publish a complete

list of approved hospitals. This procedure will be necessary, because, although in the main an approved hospital is likely to develop a close attachment to a particular medical school, it will not be possible or desirable to effect an exclusive linking of the two institutions. The governing bodies of approved hospitals are likely on occasion to claim the right to refuse to accept any student for a house-appointment and also the right to choose, either regularly or occasionally, from among the graduates of a number of schools. Conversely, it may sometimes be helpful to a medical school or the students concerned, for example on account of fluctuation, in the number of students qualifying, to be free to seek vacant house-appointments in approved hospitals other than those with which the medical school is normally associated.

19. There has been general agreement among our witnesses that the responsibility for securing a pre-registration house-appointment for any student should rest on the student's medical school. It is to be expected and hoped that, normally, a medical school will settle its students in appointments in its own teaching hospitals and in hospitals which the university of which it is a part has approved for the purpose of the house-appointments in question. In fairness to the non-teaching hospitals and in order that the house-officers' experience may be as wide and varied as possible, the aim should be to arrange for every student to hold one appointment in the parent or one of the other teaching hospitals associated with the medical school, and the other appointment in a hospital specially approved for the purpose of pre-registration house-appointments. For some time to come, the relative number of appointments in the two groups of hospitals may prevent this aim being realized in the case of all students. Occasionally, on personal grounds, a student may not be acceptable to any approved hospital. Such a difficulty is likely to be a very rare occurrence; but, whenever it occurs, the solution in our view must be for the parent teaching hospital, as the institution most closely linked to the medical school that has selected and trained the student, to provide him with house-appointments for the *whole* of the compulsory period.

Legislative amendments.

20. Our proposals raise various legal questions. In the first place they will involve new legislation. The provisions of the Medical Acts regarding admissions to the Medical Register will have to be amended so that in future anyone obtaining a registrable qualification will not be entitled to admission to the Register until he has held approved pre-registration house-appointments for a prescribed period. We suggest that it would be better not to specify the length of this period in the amending Act, but instead to place on the General Medical Council the duty of prescribing the period, subject to the approval of His Majesty's Privy Council.

21. It will also be necessary to provide that holders of pre-registration house-appointments shall be exempt, in respect of their duties in the hospitals in which they are working, from section 36 of the Medical Act, 1858. This section debar an unregistered practitioner from holding any appointment as a physician, surgeon or other medical officer in certain institutions, including any hospital not supported wholly by voluntary contributions.

22. The amendment of the Medical Acts may necessitate some changes in reciprocal arrangements in respect of the registration of medical practitioners between the United Kingdom on the one hand and overseas parts of the British Commonwealth and Empire and foreign countries on the other hand. It may also involve reconsideration of the relations established between the United Kingdom and Eire under the Medical and Dental Acts Amendment Act, 1927, which is entitled "an Act to confirm and give effect to certain

agreements between representatives of Great Britain, the Irish Free State and Northern Ireland as to the registration and control of medical practitioners," etc.

23. In law a holder of a pre-registration house-appointment will be an unregistered person, that is to say will retain the status of student. Nevertheless, if he is to profit fully it will be necessary that, in connexion with his appointment and exclusively within the approved hospital at which it is held, he shall be legally entitled to perform the duties and assume the responsibilities of a registered medical practitioner. It has been represented to us that this end might be attained by conferring upon the holders of approved pre-registration house-appointments, by an amendment of the Medical Acts or of other statutes, or of both, some or all of the privileges which as the law stands are restricted to registered medical practitioners. The privileges might include:—the right, under section 37 of the Medical Act, 1858, to sign valid medical certificates required by Act of Parliament; exemption from the prohibition of treatment of venereal diseases otherwise than by registered medical practitioners, enacted by the Venereal Diseases Act, 1917; and enjoyment of the status of an authorized person under the Dangerous Drugs Acts and Regulations.

24. An amendment would also be advisable in paragraphs 2 and 5 of the Warning Notice issued by the General Medical Council to registered medical practitioners, which stigmatize the professional offence commonly known as "covering," so as to remove any impediment to full professional co-operation between registered practitioners and the holders of pre-registration hospital appointments.

Chapter 16.

THE CURRICULUM AND EXAMINATIONS FOR REGISTRABLE QUALIFICATIONS.

FUNCTIONS OF THE GENERAL MEDICAL COUNCIL.

1. It is desirable to preface our discussion of certain general questions concerning the curriculum and examinations for registrable qualifications by a short review of the functions of the General Medical Council in relation to the Medical Register and medical education. The full title of the Council is the General Council of Medical Education and Registration of the United Kingdom. The Council was created by the Medical Act, 1858. This act did not forbid the practice of medicine by unqualified or unregistered persons; its object was to enable persons requiring medical aid to distinguish qualified from unqualified practitioners, and the General Medical Council was entrusted with functions to this end. These functions have been supplemented by the Medical Act, 1886 and other amending legislation.

2. In order that persons requiring medical aid may know who are qualified practitioners, the Council is required to keep a correct register of qualified practitioners and to publish annually the names, addresses and registered qualifications of such practitioners as they appear in the register on 1st January every year. This register is called the Medical Register. Since 1886 it has been divided into three parts. In the first or general part are entered the names of practitioners registered by virtue of qualifications obtained in England, Scotland or Ireland. The second and third parts consist of separate lists of practitioners registered by virtue of Colonial and foreign qualifications respectively.

3. The conditions that have to be satisfied to qualify for entry to the second and third parts of the Register are quoted in Appendix J. With regard to the first part, every person who possesses one or more of the qualifications described in the next paragraph is entitled to be registered on production of evidence of his qualification and payment of a registration fee.

4. The qualifications conferring the right to registration are as follows:—
Bachelor or Licentiate of Medicine of a University of the United Kingdom or of Eire.*

Licentiate of the Society of Apothecaries, London.

Licentiate of the Apothecaries' Hall, Dublin.

Licentiate of the Royal College of Physicians of London and Member of the Royal College of Surgeons of England (qualifications held in conjunction).

Licentiate of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow (qualifications held in conjunction).

Licentiate of the Royal College of Physicians of Ireland and the Royal College of Surgeons in Ireland (qualifications held in conjunction).

The bodies which grant these qualifications are called "the licensing bodies." The General Medical Council registers holders of qualifications granted by the licensing bodies, but is not itself a licensing body.

5. In all there are 27 licensing bodies, 21 in Great Britain and 6 in Northern Ireland and Eire. Of those in Great Britain 15 are universities which provide for the training as well as for the examination of medical students; the other bodies only examine students either directly or through Conjoint Examining Boards.

Inspection of Examinations.

6. As a statutory authority concerned with medical education and registration, the Council has certain functions relating to the final and other examinations of the various licensing bodies. Under the Medical Act, 1858, the Council was given the power, which it has regularly exercised, to require the licensing bodies, from time to time, to furnish the Council with such information as it may require as to (i) the courses of study and examinations to be gone through in order to obtain registrable qualifications; (ii) the ages at which such courses of study and examinations are required to be gone through and such qualifications are conferred, and (iii) generally as to the requisites for obtaining these qualifications. The Act further provided that any member of the Council or any person whom the Council deputed for this purpose might attend any examinations which have to be passed before a registrable qualification can be obtained. Members of the Council and other persons who attend these examinations are commonly known as "Visitors" and the function they discharge is known as a "Visitation of Examinations." Visitations of examinations have been made from time to time since 1858.

7. If the Council considers that the courses of study and examinations to be gone through to obtain any registrable qualification are not such as to secure that the person obtaining it has the requisite knowledge and skill for

* The degree of Bachelor in Surgery of a university of the United Kingdom or of Eire was made registrable by section 3 of the Medical Practitioners Act, 1876; and section 2 of the Medical Act, 1886, provided that on and after the appointed day (June 30, 1887) a person should not be registered in respect of any qualification referred to in any of the Medical Acts unless he had passed such qualifying examination in medicine, surgery and midwifery as is mentioned in the Act of 1886 (see also paragraph 8 of this chapter). Degrees of Bachelor of Medicine and Bachelor in Surgery are therefore normally, if not invariably, granted in conjunction.

the efficient conduct of medical practice, the Council, under the Medical Act, 1858, may make a representation to this effect to the Privy Council, and the latter may declare, by order, that the qualification shall not confer any right to registration under the Medical Acts so long as the order remains in force. Any such order may be revoked by His Majesty on the advice of the Privy Council if it appears, on further representation from the Council or otherwise, that the licensing body concerned has made effectual provision for the improvement of the courses of study or examinations, or the mode of conducting the examinations, in question.

8. The Medical Act, 1858, provided that a person could become entitled to registration if he obtained a registrable qualification either in Medicine or in Surgery or Midwifery. The Medical Act, 1886, amended this provision and required that a person should not be registered unless he had passed a qualifying examination in all three branches. A qualifying examination for this purpose is an examination in medicine, surgery and midwifery, held, for the purpose of granting a diploma or diplomas conferring the right of registration, by any of the licensing bodies, acting either severally or in conjunction for the conduct of the examination.

9. The standard of proficiency required of candidates at these qualifying examinations has to be such as sufficiently to guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery and midwifery. The duty has been laid upon the Council to secure the maintenance of this standard and to assist it to do so, it has been given the power to appoint inspectors* to attend, as the Council may direct, at all or any of the qualifying examinations held by any of the licensing bodies. The inspectors may not interfere with the conduct of any examination, but it is their duty to report to the Council their opinion as to the sufficiency or insufficiency of every examination that they attend. A copy of every report made by an inspector has to be sent to the licensing body or bodies concerned and a copy also has to be sent, together with any observations made by the licensing body or bodies, to the Privy Council.

10. Should it appear to the Council at any time that the standard of proficiency in medicine, surgery and midwifery or in any of these subjects, required from candidates at any qualifying examination is "insufficient", it is the duty of the Council, under the Act of 1886, to make a representation to that effect to the Privy Council, and the latter may, after inquiry, declare by order, that the examination is no longer deemed to be a qualifying examination for registration under the Medical Acts.

11. The extent of the Council's activities in the inspection of examinations may be sufficiently indicated by stating that since 1886 (apart from special inspections of particular qualifying examinations) general inspections of qualifying examinations were made in 1888-90, 1892-95, 1903-06, 1920-21 and 1930-32 and that an inspection of qualifying examinations to which the admission of candidates has been accelerated as a matter of emergency was undertaken in 1942-43.

12. As the Council stated in its memorandum of evidence, the standard of professional practice essential for the safety of the public "depends much more on the efficiency of clinical and other teaching in Medical Schools than on any control which the Council can exercise by inspecting qualifying

* "Visitors" appointed under the Medical Act, 1858, may be members of the Council or persons deputed by the Council, and may visit any examination, whereas "Inspectors" appointed under the Medical Act, 1886, are precluded by a standing order from being members of the Council and are only empowered to attend and report on the final examinations.

examinations of candidates whose undergraduate clinical studies have been completed before the examinations, and will not be resumed if the candidates pass."

13. In view of this fact the Council has from time to time published for the guidance of licensing bodies recommendations with regard to the subjects in which students should be instructed and the length of the various courses of study. For example, the Council has recommended that the period of professional study, between the date of registration as a medical student and the date of the final examination for any registrable qualification, should be a period of certified study during not less than five academic years; and further that the first two years should be devoted to the study of the pre-clinical subjects (designated in the Council's recommendations "professional scientific subjects") with an introduction to clinical methods, and the last three years to clinical studies.

14. The purport of these recommendations is to indicate a minimum below which a curriculum for a registrable qualification should not be permitted to fall. In issuing them the Council has not attempted or intended to assert any right, which admittedly it does not possess, to prescribe a uniform curriculum to be imposed by medical schools and licensing bodies upon all students.

Proposed inspection of medical teaching centres.

15. At the present time the General Medical Council's powers of inspection are limited to the qualifying examinations. We see the need for some central source from which medical schools can obtain advice and guidance and we have come to the conclusion, and recommend accordingly, that to meet this need the statutory powers of the General Medical Council should be extended and the council empowered to appoint inspectors who should be precluded by statute from being members of the Council, to visit the medical teaching centres from time to time and to report upon the courses of study, staffing, accommodation, equipment, arrangements and facilities for undergraduate medical education. The regular inspection of medical schools should contribute to the maintenance of good standards of training and should prove helpful to the schools. We think that the General Medical Council, being fully representative of the licensing bodies and the medical profession, is the proper body to be entrusted with the conduct of these inspections.

16. We are strongly of the opinion that if most good is to be derived, the inspectors, as a general rule, should be persons with ample and recent experience of medical teaching and examination. A report on any medical school by the Council's inspectors should in the first place be communicated to the authorities of the school concerned (and in the case of the London medical schools to the University of London also). Later, a copy of the report, together with the observations of the governing body of the medical school (and, when appropriate, of the University of London) and the Council's own conclusions should be communicated to the University Grants Committee as the body responsible for the distribution of Exchequer grants in aid of medical education. We consider it essential that close contacts should be maintained between the Council and the Committee for consultation and the exchange of information.

QUALIFYING EXAMINATIONS.

17. It will be seen from paragraph 4 that at the present time a medical student training in Great Britain has the choice of qualifying for admission to the Medical Register either by virtue of the ordinary medical degree of a university or of a diploma granted by the Society of Apothecaries of London or the Royal College of Physicians of London and the Royal

College of Surgeons of England in conjunction (on the results of final examinations held on their behalf by the Examining Board in England), or the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh and the Royal Faculty of Physicians and Surgeons of Glasgow in conjunction (on the results of final examinations held on their behalf by the Triple Qualification Board).

18. Some general indication of the extent to which students used the various channels of qualifying for registration may be obtained from the notes and tables that constitute Appendix C. The information in this appendix was obtained from an analysis that related to registered medical practitioners who qualified for registration during the five years 1933-37. This analysis was made with a view to obtaining some guidance on the following questions, namely (i) the proportion of students who were admitted to the Medical Register by virtue of each of the licensing qualifications, (ii) the proportion who obtained a university ordinary medical degree, either as a first registrable qualification or after obtaining a registrable diploma, and (iii) the proportion of students who subsequently obtained higher degrees, diplomas or additional qualifications.

19. It will be noted from the information in the appendix that (a) of those practitioners who trained at the Scottish universities nearly 97 per cent. of the men and 99 per cent. of the women took the medical degree of their university as their sole registrable qualification;

(b) the comparable figures for (i) the universities in the English provinces and Wales, and (ii) the London medical schools were:—

	Men	Women
Universities in English provinces and Wales.	About 61 per cent.	Just over 74 per cent.
London medical schools	Just over 5 per cent.	Just over 18 per cent.

These figures, however, have to be viewed in the light of the fact that approximately one-third of the practitioners trained at the London schools and one-seventh of those trained at the universities in the English provinces and Wales subsequently obtained, often within a few months, a second registrable qualification, namely a university ordinary medical degree. Thus the percentages of practitioners from the London medical schools and from the universities in the English provinces and Wales who obtained an ordinary medical degree of a university either as their first or second registrable qualification were:—

	Men	Women
Universities in English provinces and Wales.	About 76.0 per cent.	Just over 85 per cent.
London medical schools	Just over 45 per cent.	Nearly 57 per cent.

(c) over 86 per cent. of the men and approximately 78 per cent. of the women trained at the London medical schools were registered by virtue of the diploma of the English Conjoint Board. (As already noted in (b), a proportion of these subsequently qualified for a medical degree of a university, usually Oxford, Cambridge or London.)

(d) of the 4,337 practitioners who obtained an ordinary medical degree of a university either as their sole registrable qualification or as an additional qualification, about 36 per cent. of the men and the same proportion of the women proceeded to higher degrees or diplomas, whereas of the 2,157 persons who did not obtain a university degree, only about 13 per cent. of the men and 15 per cent. of the women proceeded to higher qualifications.

20. As we have already explained in chapter I, paragraph 25, in our opinion it is fundamental that the examinations which a student has to pass to qualify for admission to the Medical Register should be subordinate to the system of training. In its regulations and conduct, the training must be the master, the system of examinations the servant. Under existing conditions, such is not the case in all medical schools.

21. Examinations are an effective instrument for the selection of men of unusual ability; they are a good incentive to accuracy in thought and work; but they must not form unreasonable barriers across a man's education. If the teaching in the undergraduate period is well organized, and if the less competent and unsuitable students are eliminated in the earliest years of the curriculum, then at the end of five years in a good school almost every man with reasonable industry should be well enough trained to merit qualification. Such results are obtained in the best medical faculties in the United States of America and Canada. But a different outlook is required, one that regards the whole course as the test of each student's aptitude and does not concentrate on the final examination as the sole means of adjudication. In London the examiners at the final examinations, whether of the University, the English Conjoint Board or the Society of Apothecaries, know nothing of the candidates beyond their performance at these examinations; indeed, impartiality is emphasized by the custom that an examiner shall endeavour to avoid all candidates known to be from his own school.

22. We are of opinion that there is only one satisfactory way of ensuring that examinations are kept in the right relationship to the training and that is to make the examinations a medical student has to pass "internal" examinations, reflecting in their requirements the aims and spirit of the training which the candidates have received. We use the term "internal" in the usual academic sense, as an examination which is regulated by the university at which the student has been trained and which is conducted by the student's own teachers in collaboration with "external" examiners, who are appointed by the university but have not been associated with the student's training. The presence of the external examiners and the supervision exercisable by the General Medical Council should safeguard fully the public interest.

23. The system of final examinations adopted in the Scottish and in the provincial universities of England and Wales (Oxford and Cambridge excluded) is on the whole satisfactory in that these examinations are for the most part of an "internal" character, and are taken as a matter of course by the vast majority of the students. Further, at all these universities the course of instruction for the degree examination is not interfered with by courses for any other examination.

24. The candidates for the Scottish Triple Diploma are drawn almost entirely from the three extra-mural schools of Glasgow and Edinburgh. We have elsewhere shown that these extra-mural schools are ill-equipped for the proper training of students, and we have recommended that they should not be recognized for support by grants from the State, and should cease to train undergraduate students.

25. In London the position is quite different. There is constant competition between the University on the one hand and the English Conjoint Board and the Society of Apothecaries on the other. The University has never brought its final M.B., B.S. examination into line with its teaching. Instead of recognizing that every student, who has successfully negotiated the earlier examination fences and has carried out a satisfactory clinical course, could reasonably be given his degree with the minimum of examination, the University still insists on setting him a stiff "external" examination

reminiscent of the days when the University was only an examining body and when its chief claim to fame was in the severity of its examinations. Under these conditions it is easy for the Conjoint Board to attract almost every London University student, who looks upon the Conjoint diploma as the normal method of obtaining registration. The examination is of good vocational standard and the Colleges have made it attractive to students in London and elsewhere by making it possible for them to begin to take it early in the third year of clinical study, by allowing the examination to be taken in several portions, and by holding examinations every three months. (The examinations of the Society of Apothecaries are held eleven times a year.) The final examinations of the Universities of London, Oxford and Cambridge cannot be taken in such early fragments; they are held only twice a year; and their standard is higher. In spite of the fact that most medical schools now admit only students reading for a university degree, figures show that only 5 per cent. of the male students trained at the medical schools of the University of London take a university degree as their first qualification, while 86 per cent. of male students register by means of the Conjoint diploma. Many students who register by means of the Conjoint diploma subsequently obtain their degree, but even then only about 45 per cent. of male students eventually take a university degree.

26. In our view this competition between the University and the Conjoint Board is educationally bad. We hold (i) that the course of study provided by each medical school of the University should be the course prescribed for the university degree; (ii) that any student who has followed his course of study to the satisfaction of his teachers should be able to obtain a degree mainly for the work he has done during his course checked by a reasonable examination; (iii) that it is most undesirable that London students should be encouraged to take two final examinations, the subjects of which are the same and the standards only slightly different; (iv) that the payment of two separate examination fees, both fairly high, is not justified by the benefits obtained by the student; (v) that the practice of reading for the M.B., B.S. degree after qualification and when holding a resident appointment is not in the best interest of the students, who should be more concerned at this stage with the practice of medicine and surgery; the degree examination should be taken before resident appointments are begun.

27. It may be added that the bodies that conduct examinations but have no teaching responsibilities realize a considerable surplus from examination fees. Since it is contemplated that large sums will have to be provided from public funds for the training of medical students, the public would seem to be justified in asking that the whole of the money obtained from the examination of undergraduate medical students should, after the expenses of the examination have been met, be applied directly to meeting the cost of the students' training.

28. We therefore recommend that every medical school (i) should provide for a single organized course of training for undergraduate students, the planning and conduct of which and the admission to which would be based upon the requirements for the medical degree of the university of which the medical school is a part, and (ii) should make it compulsory for every medical student of the school to complete this course of training before presenting himself for examination in a clinical subject at any final qualifying examination for admission to the Medical Register.

29. We suggest that the University of London should reconsider the standard of its final examination and introduce into that examination some "internal" features. Examinations might be held more frequently and it is

worth considering whether university grants to schools should not be conditioned in some way by the number of students obtaining the university degree over a period of years.

30. Much of what has been noted with regard to the University of London applies with equal force to the final examinations of the Universities of Oxford and Cambridge.

DEPARTMENTAL EXAMINATIONS.

31. We suggest that the most satisfactory way to ease the heavy burden of the final examination is to institute, as a complement to the final examination, a system of departmental examinations in certain subjects. Such a system would have the additional merit of encouraging students to pay proper attention to those parts of the training, for example the instruction in the special subjects, in which owing to the absence of the examination stimulus there is a tendency under present conditions for insufficient interest to be taken. These departmental examinations would be conducted by the teachers, and students would be required to pass the examinations before proceeding to the final examination. Among the subjects to which the system might be applied are psychiatry, skin diseases, diseases of the ear, nose and throat, disorders of the eye.

CURRICULUM OF THE UNDERGRADUATE COURSE.

32. A reorganization of the medical schools and their teaching hospitals will be largely barren of results unless the present overcrowding of the medical curriculum is remedied. The load of work upon undergraduate students must be lightened by the elimination of all that is redundant or belongs to the province of the specialist. This reform is so urgent that its accomplishment might well be a condition to be satisfied before any increase is made in Exchequer grants in aid of undergraduate medical education. We consider that the General Medical Council is the appropriate body to take the initiative in this matter without delay. The Council is representative of all the licensing bodies. It has had a general statutory responsibility since 1858 for securing that no person is permitted to qualify for the medical profession except after going through a curriculum which secures his possession of the requisite knowledge and skill for efficient practice; and a special statutory responsibility since 1886 for securing the maintenance of the standard of proficiency required from candidates at final examinations. Further, since 1867, the Council has substantially influenced the curriculum laid down by particular licensing bodies, through the publication of recommendations which have indicated the content of a curriculum sufficient to safeguard the standards of medical education prescribed in general terms by the Medical Acts.

33. In view particularly of our recommendation that every student, after qualification but before admission to the Medical Register, should be required to hold for a period of twelve months junior house-appointments in approved hospitals, we urge that the total normal length of the course of training leading to the final examination should not exceed $4\frac{1}{2}$ years, comprising a pre-clinical period extending over 2 academic years, and a clinical period of 30 months which should be fully used, except for reasonable holidays of a total duration of 8 weeks. The period of house-appointments would be additional to the $4\frac{1}{2}$ years.

34. We are aware of the numerous attempts that have been made from time to time to revise the curriculum and we know that these have frequently resulted in additions. We realize that in medical education, as in other educational fields, once teaching in a subject has found a place in the

curriculum, it is extremely difficult to eliminate it or reduce its scope, even though it has become clear that such action is necessary. Nevertheless, we have satisfied ourselves that if in the revision that should now be undertaken the principles we have stated in earlier paragraphs are strictly applied, not only will a reduction in the length of the course to $4\frac{1}{2}$ years be found to be practicable, but the resultant training will become better suited to the students' needs.

35. Apart from this revision we are in full sympathy with the view, which has been submitted in evidence that the curriculum should be constantly under review with the object of keeping it abreast of the rapid advances in medical science, and of eliminating such matters as are no longer of primary importance. One medical school suggested to us that a general committee, composed of active representative teachers in all the major subjects of the curriculum, should be established for this purpose. While supporting the proposal that the curriculum should be the subject of periodic review, we do not favour the creation of a special body to perform this task. We consider that each medical school should keep its own course under constant review and that the General Medical Council, as the statutory authority representative of all the licensing bodies, should survey the various curricula periodically. The conclusions reached by the Council should be published in the form of recommendations. It might be advantageous if the Council could arrange its periodic reviews in relation to the quinquennial periods for Exchequer grants to universities, and could publish its recommendations about the middle of any such period, so that they would be available before the University Grants Committee began its assessment of the needs of the medical schools for the next grant period.

PART II—POST-GRADUATE MEDICAL EDUCATION AND RESEARCH.

Chapter 17.

POST-GRADUATE TRAINING AND EXPERIENCE FOR INTENDING SPECIALISTS.

1. Our review of post-graduate medical education has been concerned with two broad problems, namely (i) facilities for post-graduate education and experience required by medical practitioners desiring to become specialists; (ii) other forms of post-graduate education, including refresher courses for general practitioners. We have excluded pre-registration house-appointments from this part of our inquiry, because we regard these appointments as the final stage of undergraduate education, rather than the opening phase of post-graduate training and experience.

2. The provision so far made for post-graduate medical education in Great Britain is lacking in adequacy and completeness. Proper provision has not been made either for practitioners working in this country or for those from overseas. Every doctor in this country should have opportunities for keeping in touch with the progress of medical science and of advancing his knowledge beyond the extent to which it is enlarged by the experiences of his daily work. His formal education should not end with his admission to the Medical Register, but should continue in various ways throughout his professional life. A nation embarking upon a comprehensive health service cannot afford to do without a comprehensive system of post-graduate medical education.

A concerted effort on a national scale is necessary to this end. The system should provide for the differing needs of various types of practitioner. Again, more must be done in fulfilment of this country's special responsibilities to provide advanced training for practitioners from those colonial dependencies which have not yet attained as high a standard of medical education and practice as exists here. We begin our discussion by considering the needs of intending specialists.

3. The kind of post-graduate training and experience that intending specialists require and the means whereby they can obtain it are questions of great importance both in the operation of the health service and in the sphere of medical education. The improvement in hospital services in many parts of the country will be dependent upon the hospitals in those areas being staffed by clinicians with wide and mature knowledge and experience. Equally, a determining influence upon endeavours to improve the training of medical students will be exercised by the specialists on the staffs of the institutions comprising the medical teaching centres and their colleagues at other hospitals to which students go for their pre-registration house-appointments.

CLINICAL SUBJECTS, EXCLUDING PATHOLOGY.

Determination of specialist status.

4. The evidence that we have received discloses a large consensus of opinion on certain general principles concerning future specialist status in clinical subjects, excluding pathology. The principles that have a bearing on our inquiry are as follows:—

(a) The qualifications and standards of specialist status should be determined by some suitable central machinery.

(b) To qualify for such status the primary requisite should be approved post-graduate training and experience in approved institutions for a prescribed minimum period after admission to the Medical Register.

(c) As a general rule, a practitioner, as part of this approved training and experience, and before he begins to specialize, should be required to obtain *general* clinical experience in resident hospital appointments, and also, wherever appropriate, further knowledge of one or more of the following:—pathology, anatomy, physiology and the other sciences that make important contributions to medical science.

5. Most of our witnesses considered that the possession of one of the higher qualifications of the Royal Medical Colleges (some added a higher medical degree of a university as an alternative) should be one of the essential qualifications.

6. Our proposals regarding the provision to be made for the requisite training and experience are based on the assumption that the three principles noted above will be adopted. We have not the authority, nor is it necessary for us, to consider (i) the nature of the machinery that should be created for defining and regulating the qualifications and standards to be attained, or (ii) whether such machinery should include a register or official list of recognized specialists.

Length and nature of post-graduate training and experience.

7. The Royal Medical Colleges and the other bodies competent to express an authoritative view have informed us that the period of post-graduate training and experience to be aimed at for intending specialists in clinical subjects excluding pathology, is a minimum of four to five years after registration (i.e., excluding the period of pre-registration house-appointments). Assuming that the prescribed period is of this length, and having in mind,

though not exclusively, the requirements of undergraduate and post-graduate medical education, we wish to make certain general observations regarding the arrangements to be made.

8. Specialist trainees. Although an intending specialist will obtain the major part of the prescribed training and experience by holding salaried appointments involving the performance of routine duties, he should be regarded throughout as primarily a trainee, in the early stages being supervised by senior colleagues and in the later stages having the advantage of consultation with them. We shall refer to him hereafter as a specialist trainee (or trainee). As a trainee he must have adequate time for the critical scrutiny of whatever work he is doing and for reading, reflection and research.

9. Limitation on routine work. It follows that two conditions must be satisfied. First, the trainee must not be overburdened with routine work: second, he must be adequately remunerated. With regard to the first, it has hitherto been the common practice to make excessive use of the younger men and women in routine work, often to the detriment of their development. To take surgery as an example, (although a similar state of affairs exists in other branches of Medicine) at the present time in many hospitals, particularly non-teaching hospitals, the younger surgeons are overburdened by routine duties, perform many operations, acquire considerable manual dexterity, but fail to develop sound judgment, because they lack time for thought, and because their work is not adequately directed and criticized by their seniors. At times the practice is contrary to the interests of patients as well, in so far as it may lead to important clinical work being carried out by junior persons, not fully competent to undertake it on account of their lack of experience.

10. Adequate remuneration of trainees. Regarding the second condition, it is essential that the salaries attaching to the various appointments held by specialist trainees should be such that there is no need for them to seek other sources of income. Frequently under existing conditions a trainee, in order to support himself, is forced to accept a number of appointments in different institutions or to undertake a burdensome amount of work in coaching students.

11. General clinical experience. Generally the basis of the training and experience should be at least six months' resident clinical experience of general medicine or general surgery. This period should be additional to the period of pre-registration house-appointments. Such basic clinical grounding, over and above the experience gained prior to registration, is particularly important in view of the high degree of specialization that now exists within Medicine. Experience has proved that, unless those practising a special branch have been so grounded, there is grave danger that the work and development of that speciality will become warped. Moreover, if all specialists have a good general grounding the task of providing medical students with a properly balanced view of the whole range of medical activities will be greatly assisted.

12. Extension of trainee's scientific knowledge. Every trainee should have the opportunity to devote himself for one year, free from clinical responsibilities, to the extension of his scientific knowledge, by work and study in, say, the departments of pathology and in addition, or alternatively, in the department of anatomy or physiology or one of the other sciences allied to medical science. The period might be shorter than a year in the case of a trainee who had interrupted his undergraduate medical training for the purpose of extra study of one of the allied sciences. Each trainee should be free to choose which of the subjects he will study. The nature of his work may vary considerably. Some trainees may take part in the teaching of undergraduate students, others may engage in research work. These variations are immaterial. The important thing is that the trainees will be working

for a period in the scientific atmosphere of these departments. While so doing, they should be treated as supernumerary staff of the departments to which they are attached. It follows that the budgets of these departments must include adequate provision for such supernumerary staff.

13. Encouragement of team-work. So that they may appreciate fully the necessity and value of team-work, specialist trainees in all branches of Medicine, and those specializing in the allied sciences, should be given every encouragement to work together on the many problems of common interest.

14. Development of teaching ability. Every specialist is a potential teacher of undergraduate or post-graduate students or both, and at any given time many of them will either be serving as teachers or be supervising the work of students holding pre-registration house-appointments. Careful watch should, therefore, be kept for specialist trainees possessing an aptitude for teaching and every endeavour should be made to develop teaching powers by giving guidance and criticism from an early stage.

15. Encouragement of trainees to work abroad for a time. Trainees should be encouraged to work for a time in suitable hospitals and medical schools abroad. Encouragement will have to take the form of an adequate number of fellowships of substantial value. Hitherto, the number of medical men and women who have studied and worked abroad has been regrettably small and would have been much smaller but for generous help from organizations in other countries, particularly the United States of America. While viewing these benefactions with gratitude, and hoping that, in the furtherance of international co-operation in Medicine, they may continue and be complemented by fellowships and similar awards by organizations in this country to enable students from abroad to study here, we feel that the nation should not be content to rely in this matter on the benevolence of others. For the maintenance of a high standard of medical practice, teaching and research in this country, it is essential that at least those who are destined to become the future leaders of the medical services here should obtain first-hand acquaintance with medical thought and practice in other parts of the world. The provision of fellowships may rightly be regarded as a necessary part of a national health service and the cost an insignificant part of the price that has to be paid for that service.

16. Opportunities for general practitioners to become specialist trainees. It is essential that such regulations as may be made with regard to the training and experience of intending specialists should not preclude a practitioner from becoming a specialist trainee after a period in general practice. Whether a man becomes a trainee immediately after his registration, or, after experience in general practice, will depend on individual development and varying circumstances and opportunities. It is certain that experience gained as a general practitioner will be a most useful background for specialist work undertaken later in a man's career.

Where the training and experience should be obtained.

17. For trainees to derive full benefit from their post-graduate training and experience they must work under the guidance and advice of the best teachers that can be found, in hospitals, clinics and laboratories in which work of the highest possible standard is conducted. Their teachers should be men and women possessed of professional skill of the highest order, a scientific outlook, and the capacity to inspire their younger colleagues and to guide them wisely. The fact that a hospital is doing a large volume of clinical work does not alone make it a suitable place for the training of future specialists.

(a) In medical teaching centres.

18. Because of the quality of their staff and their facilities for teaching and research, both in clinical medicine and in the medical and other sciences, the various medical teaching centres should cater for specialist trainees to the fullest possible extent consistent with their primary educational responsibility for the training of undergraduate students. The associated teaching hospitals, both general and special, of a teaching centre should be fully used, since they are likely to be of particular value in enlarging the clinical experience of specialist trainees. More types and variations of cases will probably be found there than in the parent teaching hospital, since admissions to the latter will to some degree be selected to meet the requirements of undergraduate training.

19. Some specialist trainees may hold post-graduate fellowships during part of the prescribed period of training and experience, but the general practice will be for the trainees to hold salaried appointments in the pre-clinical departments, the pathological laboratories and the various clinical departments according to their needs. As their training and experience develop, trainees will usually assist in the teaching of medical students and in the routine work of the institutions constituting the teaching centre.

20. Any special courses of instruction provided in the teaching centre for specialist trainees might be given by the regular teachers of the undergraduate students, or by teachers devoting themselves specially to post-graduate students. To deny the teachers of undergraduate students the opportunity of engaging, if they so wish, in post-graduate teaching would be to deprive them of an intellectual exercise and stimulus greatly to their benefit. Their teaching of the trainees should, however, be kept entirely separate from their teaching of undergraduate students.

21. The need for adequate facilities for specialist trainees is an important factor to be taken into account in determining the staff of a medical teaching centre. As a rule the number of persons on the staff will have to be larger than would be required for the care of patients and the teaching of undergraduate students. This fact, together with the necessary limitation on the amount of routine work that specialist trainees are called upon to perform, will affect the existing staffing establishments of medical schools and teaching hospitals. More assistants of the junior and intermediate ranks will be required and in many instances senior part-time members of the staff will have to spend more time in the teaching hospitals. As a general principle, additional expenditure incurred thereby should be regarded as part of the educational expenses of the teaching centre and, as such, one of the items towards the meeting of which Exchequer grants in aid of medical education can be applied.

(b) In post-graduate medical schools and in institutes associated with special hospitals.

22. Post-graduate medical schools such as the British Postgraduate Medical School in London and the Post-graduate Medical School of the University of Oxford should also contribute to the provision made for specialist trainees. Their contribution is likely to consist mainly in providing approved clinical appointments to be held by trainees during the latter half of the prescribed period of training and experience. The proportion of these appointments available for trainees from Great Britain will have to be determined in the light of the demand from practitioners from the Dominions and Colonies for specialist training in this country.

23. In the case of most of the special branches of medicine and surgery it will be essential, as in the past, for the greater part of a trainee's period of

service to be in one or more of the leading special hospitals concerned with the branch of Medicine for which he is preparing. There is an urgent need for the development of facilities in this respect.

24. Provision for the training of experts in the special departments of medicine and surgery has been singularly lacking in Great Britain in comparison with the Continent of Europe and the United States of America. In nearly all the large continental universities, departments or institutes for the study of the special branches of Medicine exist as part of the university hospitals. These departments are self-contained units in charge of a professor, who, though nominally part-time, in fact devotes the greater part of his time to the clinic. They often contain 100 to 200 beds, operating theatres and treatment rooms, lecture theatres and laboratories. The out-patient department may be either situated in the unit or be part of a polyclinic, but in the latter case each department has its own suite of rooms. The professor has a considerable staff of assistants, some of whom may hold a rank equivalent to that of reader in an English university, and the majority of whom are employed whole-time. In addition the more popular teachers have a number of voluntary assistants (trainees). Research forms an essential part of the training of all assistants.

25. In Great Britain, the post-graduate training of intending experts in the special branches has, in the main, had to be carried out in special hospitals. As a rule, the special departments of the general hospitals used for the training of undergraduate students have not been large enough to provide post-graduate students with the range and variety of clinical experience that they need. Even in those general teaching hospitals in which the special departments deal with a large number of out-patients, the number of beds allotted to the special departments has been too few to permit systematic investigations on a series of cases, while, usually, departmental laboratory accommodation has been lacking, and the teaching that the staffs of the departments have been able to give at out-patient sessions has been largely devoted to undergraduate students.

26. There may be occasions when it might be suitable to have a specialist institute within the precincts of the general teaching hospital but we do not advocate that the general teaching hospitals for undergraduate students should in the ordinary way strive to enlarge their special departments to a size that would make them suitable as training grounds for specialist trainees in the special branches.

27. The special hospitals in Great Britain vary considerably in size and reputation. Some are so good that they have attained international recognition as pioneers in the development of their special subjects. This reputation was gained in the days when Medicine was progressing mainly as the result of clinical observation alone. To-day clinical observation and laboratory investigation must combine if further progress is to be made.

28. The special hospitals have rarely had the money to spare either to provide adequate laboratory accommodation or to pay their staff. The members of the staff, however enthusiastic, being unpaid, could only give a portion of their time to their hospital work, and, being unprovided with a staff of highly-trained assistants, have been compelled to do much routine work which could with advantage have been delegated. Very few have had time for serious original work, still less for directing any assistants they might have. The hospitals have not received grants for educational work, though one special hospital in London has been able to develop a research department of high standing with the help of grants from the Rockefeller Foundation and the Medical Research Council. This instance, however, is exceptional.

29. At the present time, there is a considerable shortage of competent specialists in a number of branches of medicine and surgery. With the development of a national health service many more specialists are likely to be needed. Those who fill posts in the special subjects should have had post-graduate training and experience of as high a standard as the general physicians and general surgeons. They are not likely to unless a number of institutes are developed in the principal special subjects to serve as the spearhead of post-graduate education and research in these subjects. Included among these subjects are child health, neurology, endocrinology, psychiatry, dermatology, orthopaedics, ophthalmology, oto-laryngology, urology, forensic medicine. The number of institutes in each of the various subjects would vary. In certain subjects one institute might adequately serve the whole country; in other subjects several institutes may be needed. All should be departments or schools of universities and should receive public grants through university channels in aid of their educational work. Each should be based upon a large special hospital which specializes in the branch of Medicine in question and which conforms to university standards in such matters as staffing, teaching accommodation and equipment. Probably most of the special hospitals which would be suitable would have to be up-graded in these respects and would have to be assisted financially in the process. Normally, the more senior members of the staffs of any one of these institutes would be associated also with an undergraduate medical school.

30. London with its large population can become one of the finest centres of post-graduate teaching and research in the world, if its resources are properly used. It is ideally suited for a comprehensive range of institutes for post-graduate training and research in the special subjects. The manner in which these institutes might be provided in association with the British Postgraduate Medical School is discussed in chapter 19. It would be very unfortunate, however, if the establishment of specialist post-graduate institutes was confined to London. The other universities with medical faculties should be encouraged to develop such institutes according to their local resources and opportunities. Some have already begun to do so. In the main it would be undesirable for each one of them to attempt to found institutes in all, or even in most, of the special branches. It would be better for each to concentrate on one or two branches in which it has peculiar opportunities. For the avoidance of chaotic development, it is to be hoped that the universities, in consultation with the professional and scientific bodies concerned, will agree on a national plan for these institutes and relate their individual schemes to this plan.

(c) In other hospitals.

31. The undergraduate teaching centres, the post-graduate schools and institutes are not likely to be able to provide all the facilities required for specialist trainees; and even if they could they should not attempt to do so. It is desirable that every trainee should receive part of his training and experience in these institutions, but it is equally desirable that he should obtain practical experience in other suitable hospitals, and particularly in the hospitals approved by the various universities for the purpose of pre-registration house-appointments. The inclusion of these hospitals in the arrangements for specialist trainees is strongly advocated. If a hospital is approved for pre-registration house-appointments, its medical staff should be well qualified to deal also with specialist trainees. The presence of these trainees should prove a stimulus to the staff, should be beneficial to the junior house-officers and should help to strengthen the links between these hospitals and the university medical schools.

PATHOLOGY.

32. Post-graduate training in pathology will be required for two large groups (i) those intending to practise as pathologists; and (ii) those who wish to increase their knowledge of pathology as an essential background to specialization in some other branch of Medicine, or general practice. Training may take two forms—(i) the trainee system such as has been instituted in a regularized form during the war and which was practised in a more haphazard fashion before the war; (ii) the provision of organized courses like those at the University of Manchester and the London School of Hygiene and Tropical Medicine for the diplomas of bacteriology, or that at the British Postgraduate Medical School for the diploma of clinical pathology. There is no question that the former is the method to be preferred. It is essential for the man who wishes to be a pathologist, it can readily be adapted for the man who wishes to spend a year in pathology before going on to become a surgical or medical specialist.

33. It is most desirable that, if arrangements are made for determining and maintaining the qualifications for specialist clinicians, corresponding arrangements should be made in respect of pathologists. It has been submitted in evidence that the post-graduate training and experience that should be demanded might be on the following lines:—

(a) After a period of clinical house-appointments, the trainee in pathology, before deciding in which branch he will specialize, should spend at least three years working in the various pathological departments in turn, that is to say in the department of morbid anatomy, bacteriology (including the department of public health bacteriology), chemical pathology and clinical pathology. The trainee should be paid an adequate salary. He should be encouraged to undertake research work in addition to teaching and routine investigations, and to publish papers under his own name. For part of the time he should hold a resident appointment in pathology.

(b) Normally, on the completion of this part of his training, the trainee should undertake for six months or a year pathological work in a hospital away from the teaching centre, in some cases in a hospital abroad. At the end of this time he should be equipped for an appointment in the intermediate grade in the general pathological laboratory service, and be eligible for recognition as a non-specialist pathologist. He should be competent to do ordinary pathological work but would not be a specialist in any branch.

(c) Specialization would come at this stage and not before. If, for example, the trainee wished to become a specialist bacteriologist, he would become attached for a further period to a department of bacteriology.

34. It should be recognized that the scheme adopted must be sufficiently elastic to include those who clearly have an aptitude for certain branches of pathology but for various reasons have not fulfilled all the criteria laid down. For instance, as biochemistry advances, it is likely that, in many instances, only the man who has specialized in chemistry from the beginning of his university career will have sufficient knowledge and experience to fill the higher posts in chemical pathology. Such men will not necessarily have a medical degree nor have completed any course of training in other branches of pathology.

35. If trainees take any post-graduate diploma examinations, for instance in bacteriology or clinical pathology, they should do so in their stride without necessarily attending any special course. Such special courses will be

required largely for students from overseas and for science graduates who do not possess a medical degree. It is essential that the highest academic standard should be maintained. As far as possible entry to the course should be limited to students with at least one year's previous laboratory experience. The acquisition of a diploma should not of itself entitle the holder to recognition as a specialist pathologist.

PUBLIC HEALTH.

36. If specialist status is defined and a register or official list is kept of those who have attained this status, the standard applied to medical specialists in public health work should be comparable to that applied to specialist physicians and surgeons. The prescribed period of post-graduate training and experience should be approximately of the same length, say four to five years after registration.

37. The nature of the training and experience which intending public health officers should be required to obtain in future is being considered by bodies with first-hand experience of public health work, and may be materially affected by the proposals for a national health service. We, therefore, limit ourselves to the following general observations:—

Intending public health officers should add to their general clinical experience by holding appointments as senior house-officers in general or special hospitals and by spending some time in general practice. The course of instruction for the post-graduate diploma must be properly planned, and conducted only at institutions that have staff and facilities of university standard. The examination for the diploma should be conducted by the universities providing the training. The final stages of the post-graduate training and experience of the future health officer will presumably consist of service as a member of the staff of a recognized public health department.

Special provision should be made for instruction in industrial medicine and it is a matter for consideration whether this should form an optional part of the public health course or be organized separately.

38. It will be necessary for the universities generally to raise the standard of the post-graduate training which they provide in preventive medicine. Broadly speaking, the leading post-graduate schools in, say, the United States of America, are better equipped, better staffed and more fully organized both for post-graduate teaching and research, than their British counterparts, with the notable exception of the London School of Hygiene and Tropical Medicine.

TROPICAL MEDICINE AND HYGIENE.

39. While a man may acquire a considerable amount of theoretical knowledge and become reasonably proficient in certain laboratory processes, it is abundantly clear that he cannot be given an adequate clinical training in tropical medicine in this country. Therefore, we suggest that, having obtained his theoretical and laboratory instruction here, a student wishing to specialize in tropical medicine and hygiene should be required to hold approved hospital appointments in tropical countries, as part of the prescribed post-graduate training and experience in this branch of Medicine. It is likely that such a development would prove very popular in the Colonies and it would furnish British students with excellent experience, not only of tropical diseases, but of clinical work generally.

Chapter 18.

REFRESHER COURSES FOR GENERAL PRACTITIONERS AND OTHER FORMS OF POST-GRADUATE EDUCATION.

REFRESHER COURSES.

1. "One of the gravest disadvantages of present-day general practice is that most practitioners have, neither the time nor the opportunity for post-graduate study. The knowledge they once possessed grows rusty, their outlook becomes restricted and they are unable to keep abreast of new discoveries and new techniques. What opportunities there are for post-graduate work are too few and too centralized, the courses do not always give the practitioner what he most needs, and the instruction is frequently given by teachers who are not experienced in general practice and lack understanding of the general practitioner's outlook and difficulties. Post-graduate study should be a regular and recognized feature of general practice and adequate and suitable facilities should be provided." This extract from a very helpful memorandum received from the British Medical Association sums up the needs of the general practitioner and indicates the shortcomings of the existing arrangements.

2. The solution most usually proposed is the organization of sufficient intensive refresher courses at suitable centres to enable all general practitioners to attend them with reasonable frequency, say every three or five years. We agree that for at least some time to come such courses will have to be provided; but we do not view them with enthusiasm, feeling that their provision should be regarded as a short-term expedient rather than as part of a long-term policy of medical education. Intensive courses attended at intervals of several years, whether they are whole-time courses of two or more weeks duration, or part-time courses spread over a longer period, do not constitute the most satisfactory form of continuing education; it is education in heavy but infrequent doses. General practitioners would benefit more from regular contacts, resembling those enjoyed by consultants and specialists on the staffs of hospitals, with colleagues more competent than themselves in certain branches, and with work that is based on latest knowledge. Such contacts not only yield new information, but stimulate thought and study. In the main, under existing conditions, a general practitioner lacks contacts of this nature, his professional work being often conducted in isolation. The development of a comprehensive health service, with the consequential reorganization of the hospital services and a widespread distribution of specialists throughout the country, should provide the opportunity for associating general practitioners to an increasing extent with the work of hospitals and specialists. It should be possible to arrange for general practitioners living within reasonable travelling distance of large hospitals to be appointed to clinical assistantships in such hospitals, these appointments involving attendance at the hospital for stated periods each week or month. Presumably, outlying hospitals that may be largely staffed by general practitioners in the locality will be linked with large central hospitals, and specialists from the latter will attend such hospitals regularly to conduct consultative clinics.

3. Although, undoubtedly, there would be difficulties to be surmounted, means should also be sought for keeping a general practitioner in touch with the progress of any of his patients admitted to a hospital to which he is not attached. Not only would a general practitioner's knowledge and experience be enlarged thereby, but he would be in a better position to practise social medicine and to fulfil his role in the rehabilitation of his patients after their discharge from hospital.

4. Local medical societies should be encouraged to hold their meetings regularly at suitable hospitals in the area. Such meetings, especially if they were associated with the conduct of clinical demonstrations, the reading of papers, and the review of current literature by the hospital staffs, would be helpful in maintaining a practitioner's interest in his work, by keeping him in touch with hospitals to which his patients may be transferred and by stimulating him to a more active interest in his local medical society and its activities.

5. Contacts such as these would keep a general practitioner in touch with the main stream of advancing Medicine. Their full development is likely to be the task of years, and will be dependent upon the conditions of general practice in future being such that the daily demands of his practice do not absorb the whole of the practitioner's time and energy, but allow him the opportunities he must have, if he is to keep his knowledge and methods up to date. Once these contacts have been fully established, the need for organized periodic refresher courses (such as we are considering in this section) should be slight. We strongly recommend that the making of arrangements on the lines that we have mentioned, or other arrangements having the same objective, should be part of the policy guiding the design and development of the national health service.

6. However, for many years after the war, apart from the provision required in respect of medical practitioners returning from service with H.M. Forces, an organized system of periodic refresher courses for general practitioners will be essential. On the question of the type of refresher course that will be most useful to general practitioners, we quote with approval from the memorandum of evidence from the British Medical Association. In the view of the Association the course should comprise:—

“(1) A ‘brushing-up’ of the knowledge which all general practitioners should possess. This should include a revision of (a) the aetiology, diagnosis, clinical course, and treatment of the illnesses with which the general practitioner is in daily contact; and (b) methods for the maintenance of health, including nutrition and dietetics, child health, and antenatal and post-natal care.

(2) Instruction in recent advances in diagnosis, treatment, and prognosis, with particular emphasis on methods which can be applied by the general practitioner unaided. The practitioner may have become acquainted with these advances through the medical literature, and the refresher course should provide him with systematic instruction and an opportunity of performing for himself new methods under the guidance of a teacher.

(3) Instruction in the recent advances in the diagnosis and treatment of common diseases which cannot be applied by the general practitioner unaided, but a knowledge of which should form part of his equipment. General practitioners in the health centres of the future should be associated with services providing the most modern specialist methods of early diagnosis and treatment, and they should be trained to make the fullest possible use of these facilities.”

7. The course should be specially designed for general practitioners. It should be essentially practical, in nature, and full use should be made of out-patient departments, since the clinical problems dealt with there will more nearly approach those that arise in general practice. Illustrations, by patients, films, and pathological specimens, will be valuable. The teachers should be familiar with the conditions under which general practice has to be conducted, and sympathetic towards the difficulties with which general practitioners have to contend. Some of the teachers might with advantage be suitably qualified and experienced general practitioners.

8. A whole-time course extending over a fortnight, three weeks or a month, during which the practitioner has a short complete break from his daily routine, is by far the most beneficial, but it may be necessary to provide also some week-end courses or whole-day or half-day courses spread over a period of weeks or months. Whatever the type of course it should be organized on a systematic basis. It is desirable that when a practitioner takes a whole-time course of several weeks' duration he should do so at a centre that is some distance away from the area in which he practises, so that he can devote himself wholly to the course, free from any possible distracting demands from his practice.

9. Should it be considered desirable to make attendance at refresher courses compulsory, similar arrangements will, presumably, have to be made to those embodied in the scheme introduced before the war for refresher courses for national health insurance practitioners. These arrangements included the provision and payment of locum tenentes, the payment of the travelling expenses incurred by a practitioner in attending the course, and a subsistence allowance or accommodation and board in or near the hospital at which the course was held.

10. In order that the teaching may reach and be maintained at a high standard, the responsibility for organizing these refresher courses, and also other forms of post-graduate education, should rest with the universities having a medical faculty. The machinery for the fulfilment of this responsibility is discussed below. Although organized by the universities, refresher courses would, in general, be conducted elsewhere than in institutions comprising undergraduate teaching centres, and the teachers would not be those engaged in the training of undergraduate students, but would be approved by the universities specially for these courses. A principle, which in the light of proved experience should be strictly applied, is that courses of instruction, including refresher courses, for post-graduate students should be entirely separate from courses for undergraduate students. It is preferable that they should be conducted in different institutions, but where such an arrangement is not possible or desirable, they should be conducted at different times. It will be apparent from our remarks in earlier chapters concerning the beneficial influence on hospital services of association with educational work that, in our view, the more widespread the distribution of refresher courses among suitable hospitals, the better from the point of view of the hospital service. It will also be advantageous from the standpoint of the teachers conducting the courses and the general practitioners attending them.

11. If a series of identical refresher courses were conducted consecutively throughout the whole or greater part of a year, by the same group of teachers, the deadening influence of frequent repetition would quickly and inevitably have a detrimental effect on the quality of the teaching. The courses in which any teacher is called upon to take part in any year should be few in number and well-spaced.

12. The convenience of general practitioners will also be served by using a large number of hospitals for the courses. As the British Medical Association pointed out in the section of its evidence quoted above in paragraph 1, one of the defects of the present arrangements is that courses are too centralized.

13. It is among the hospitals which are not part of medical teaching centres, but which are approved for the purpose of pre-registration house-appointments, that the most suitable places for refresher courses will normally be found.

OTHER FORMS OF POST-GRADUATE EDUCATION.

14. Undergraduate medical training, being essentially a basic course concerned primarily with general principles, many practitioners may wish from time to time to attend some systematic course of instruction in a particular subject, for example, child health, social medicine, or nutrition and dietetics, with a view to obtaining a wider and more precise knowledge. It is desirable that provision for such courses should be made, not with the object of creating "pseudo-specialists or pseudo-consultants, but to stimulate interest and broaden the outlook of general practitioners."* In some cases study of this kind might best be provided through the provision of short-term clinical assistantships in hospitals. Further, provision must be made for the medical practitioners who each year come from overseas to this country with the object of learning about the British practice of Medicine.

15. One of the principal purposes for which the British Postgraduate Medical School in London was founded was to provide these forms of post-graduate education for practitioners from various parts of Great Britain and from abroad. This school, however, cannot be expected to meet the whole of the need. Each university having a medical faculty should play its part, not as a rule by providing courses in its undergraduate teaching centre, but by arranging courses in suitable hospitals which are in the zone of influence of the university but are not used for undergraduate teaching.

ADMINISTRATION.

16. If, as we have recommended, the various universities having a medical faculty assume responsibility in connexion with post-graduate medical education, it will be desirable that for the fulfilment of this responsibility each of these universities should appoint a special committee or board of post-graduate medical studies. This committee should be part of the organization of the faculty of Medicine. Such committees were in existence in some universities before the war. The members of the committee should include members of the faculty, general practitioners and representatives of local medical societies, of local authorities and of hospitals in which post-graduate training is given. It will also be advisable for each university to depute a person to undertake the organization and general supervision of the post-graduate arrangements coming within the ambit of the committee. This person should be an ex-officio member of the committee of post-graduate medical studies. In some cases he may be the chairman of that committee; in other cases he might hold the position of dean for post-graduate medical studies. His responsibilities and duties should be integrated with those of the dean of the faculty of Medicine of the university. Arrangements for the deans for post-graduate medical studies, or persons holding equivalent appointments, at the various universities to meet together periodically would help to secure a satisfactory organization of post-graduate education in all parts of the country and to further its development.

17. In October, 1943, we informed you by letter of the conclusions set out in the last paragraph. We did so because we had received representations that preliminary action was about to be taken for the organization of post-graduate courses of training for medical practitioners demobilised from H.M. Forces, and that it was desired that the machinery used for this purpose should conform to the long-term plans. We understand that the universities concerned have already been invited to take action on the lines suggested in our letter.

* Memorandum of evidence from the British Medical Association.

Chapter 19.

THE ORGANIZATION OF POST-GRADUATE MEDICAL EDUCATION IN LONDON.

1. The potentialities of London as a centre for the further education of medical practitioners from all parts of the world have not been realized. For more than 50 years arrangements of various kinds have been made to utilize its exceptional resources. Many of its medical institutions have a world-wide reputation, yet London has failed to attract as many post-graduate medical students, even from the British Commonwealth, as have centres on the Continent of Europe or in the United States of America. Many more students could have been provided for than have come. The main cause, as Sir William Osler pointed out as long ago as 1911, has been a lack of organization and cohesion. The facilities are there, men of outstanding distinction in their various subjects are there, but the organization has remained deficient despite the special efforts* made to improve it during the period between the two wars. We recommend that when the present war is over these efforts should be pursued with increased vigour and determination.

TYPES OF INSTITUTIONS ENGAGED IN POST-GRADUATE EDUCATION.

2. In London there are several types of institutions which are engaged in post-graduate education or which have suitable facilities for such work. These institutions can conveniently be grouped in six main classes:—

(i) The undergraduate medical schools of the University of London and their parent teaching hospitals, which, in the field of post-graduate education, provide appointments giving specialist training and experience to a proportion of their own graduates, arrange courses for certain higher degrees and diplomas, and hold refresher courses for general practitioners among their own graduates.

(ii) The British Postgraduate Medical School, which is a school of the University of London, and the London County Council's Hammersmith Hospital, to which the school is attached.

(iii) The London School of Hygiene and Tropical Medicine, opened in 1929; a school of the University of London, providing a variety of special post-graduate courses of instruction and having a large whole-time staff of scientific workers devoting much of their time to research.

(iv) Various other schools of the University of London engaged to a greater or less extent in post-graduate medical education and research in special subjects. These schools are the Lister Institute of Preventive Medicine, the Maudsley Hospital, the Bethlem Royal Hospital, the Royal Cancer Hospital (Free).

(v) Three special hospitals, namely the Royal London Ophthalmic Hospital, the Hospital for Sick Children, and the National Hospital for Diseases of the Nervous System, which are not schools of the University of London, but which have "recognized" teachers of the University on their staffs.

(vi) Many general and special hospitals, both voluntary and municipal, with suitable facilities and staffs for the conduct of post-graduate education, but lacking at the present time any association with the University of London.

* The Fellowship of Medicine was established at the end of the last war to arrange facilities for post-graduate students from overseas, principally those from the Dominions and Colonies. The British Postgraduate Medical School was founded in 1935.

3. It is generally agreed that the institutions in the first class, namely the undergraduate medical schools and their parent hospitals, should remain outside the main organization of post-graduate medical education in London apart from their important function of providing appointments for specialist trainees and certain courses of instruction which some of these trainees may wish to attend in preparation for higher degrees and diplomas. Although not a part of the post-graduate organization, it is to be hoped that they will have contacts with the post-graduate institutions. The main link will probably be through the staffs of the special departments, some of whom might with advantage be on the staff of an undergraduate medical school and also on the staff of one or other of the post-graduate institutes. In devising a scheme for the future organization of post-graduate medical education in London, we are concerned with the institutions included in the remaining five classes.

The British Postgraduate Medical School

4. The obvious nucleus of such a scheme is the British Postgraduate Medical School. It is, therefore, desirable to look first at the objects for which this school was founded, its present circumstances and future prospects. The school was incorporated by Royal Charter in July 1931 and opened in May 1935. The first steps which led to its establishment, and also to the founding of its sister institution, the London School of Hygiene and Tropical Medicine, were initiated by the appointment, in 1921, by the then Minister of Health, of a committee, presided over by the Earl of Athlone, to investigate the needs of medical practitioners and other graduates for further education in Medicine in London, and to submit proposals for meeting them. This committee recommended the establishment of (i) a school, associated with the University of London and devoted solely to post-graduate medical education, and (ii) an Institute of State Medicine. The second of these recommendations was the first to be realized and eventually took form as the London School of Hygiene and Tropical Medicine.

5. The preparation of a "practicable scheme" for implementing the first of these proposals was entrusted to a second committee which was appointed in 1925 and reported at the beginning of 1930. This committee began by examining the possibility of attaching the proposed school to a general hospital in the centre of London, which was clearly the ideal position. Finding such an arrangement impracticable it proceeded to consider other proposals, and finally recommended the establishment of a school in association with the Hammersmith Hospital, which is administered by the London County Council.

6. A third committee, usually known as the Chelmsford Committee, was responsible for planning the constitution and organization of the school. It included representatives of the University of London, the Royal Medical Colleges, the Medical Research Council, the Ministry of Health and the London County Council. A note is appended (Appendix O) setting out the objects of the school, and giving information about its administrative arrangements, and in broad outline, the main provisions of the agreement entered into by the governing body of the school and the London County Council. For our present discussion we need only note—

(i) *Objects.* The aim was to provide such a centre for the advancement of medical knowledge as would be worthy of the British Commonwealth and Empire. While the school is intended for qualified medical men and women from any country, it exists specially for those from the United Kingdom, the Dominions, India and the Colonies. In addition to developing the resources of the school and hospital at Hammersmith, the governing body of the school is directed, under the terms of its charter, "To

arrange for co-ordination with other authorities at present providing post-graduate or other medical or scientific education in London."

(ii) *Government.* The governing body includes nominees of the University of London, the London County Council, certain government departments, the Royal College of Physicians of London and the Royal College of Surgeons of England, the Society of Apothecaries, the Royal Society of Medicine, the British Medical Association and five co-opted members. The Dean of the Medical School is its secretary. The governing body is required by the school's charter to appoint a finance and general purposes committee, composed entirely of members of the governing body, and a school council, which is an advisory body, considering and reporting to the governing body upon academic matters and questions of educational policy.

7. During the nine years since its opening the school has established the following main departments:—medicine, surgery, obstetrics and gynaecology, and pathology. Hammersmith (L.C.C.) Hospital has a number of visiting specialists but the school has not developed organized departments in the various special subjects and only recently has begun to establish links with the large special hospitals in London on the lines proposed by the Athlone Committee.

Handicaps to the development of a comprehensive post-graduate organization in London.

8. One of the most serious handicaps to the building up of an organization embracing all branches of post-graduate education in London has arisen from the scattered distribution of the main special hospitals and the relative isolation, geographically, of the British Postgraduate Medical School at Hammersmith from the centre of London and these special hospitals. Another difficulty has arisen from a reluctance on the part of the special hospitals to link up with the British Postgraduate Medical School because they feared that by so doing they might lose their identity and freedom of development. To some extent this fear may have been grounded upon too narrow a view of the British Postgraduate Medical School as an organization associated solely, or primarily, with Hammersmith Hospital.

• FUTURE ARRANGEMENTS.

9. Ideally, the British Postgraduate Medical School should be an integral part of a post-graduate hospital centre, consisting of a general hospital of appropriate size and a number of separate institutes for each of the principal branches of Medicine. For preference such a centre should be geographically related to the central buildings of the University, the Royal Medical Colleges, the Royal Society of Medicine and other medical and cultural societies. Residential accommodation for students and dining rooms and common rooms for staff and students should form part of the centre or be associated with it. A post-graduate centre of this nature would occupy a very large area of ground and the cost of building would be great. Moreover, assuming that the site were in the centre of London, it is highly improbable that the hospital needs of the area would justify the erection of a new general hospital and special institutes except in replacement of existing hospitals. There is a redundancy of hospitals in the central area and the population is declining. The obstacles to the achievement of this ideal in the near future seem insuperable. Nevertheless, on a long view, it is desirable that the hospital authority for London should make the ideal one of its guides in the preparation and carrying out of its plans under the national health service.

10. If, as seems the more probable course, Hammersmith Hospital continues to be the general hospital associated with the school, everything possible should be done to make the Hospital more easily accessible from central London. We consider that the provision of an underground railway station opposite the hospital will be essential. Apart from meeting the needs of staff and students attending the school, it would be helpful to relatives and friends of the patients in the hospital which, in view of its attachment to the post-graduate school, should freely admit patients from outside its immediate neighbourhood.

11. A satisfactory organization for post-graduate medical education in London can be developed around the British Postgraduate Medical School on the basis of Hammersmith Hospital and existing special hospitals. We describe below, in very broad outline, the form which the organization might take.

12. We recommend that the British Postgraduate Medical School should be reconstituted as a federal organization embracing not only the departments and teaching organization which are attached to Hammersmith Hospital and which at the present time constitute the school, but also a series of institutes in the various special subjects, each institute being based on the most suitable special hospital in its particular subject. For convenience of discussion we shall from now on refer to the existing departments at Hammersmith as the "Hammersmith Post-graduate Institute". Except when the contrary is clear from the context the terms "British Postgraduate Medical School" or "the school" will refer to the proposed federal organization. The "Hammersmith Post-graduate Institute" will be in the same relationship to the federal organization as the proposed special post-graduate institutes.

13. The central office of the school should be in the centre of London in the vicinity of the headquarters of the University of London and not attached to any of the institutes federated to the school. In addition to accommodation for the chief administrative officer of the medical school and the office staff, provision should be made in the central office for a library for the students and for dining and common rooms open to the staff and students of all the federated institutes. The governing body of the school would meet at this office where the co-ordination of post-graduate educational work in the federated units would be undertaken. Students would also obtain from the office advice as to the facilities available in the various institutes of the school. If other universities saw fit to co-operate, this bureau might well become a national centre for information on existing opportunities and resources for post-graduate education. We attach the greatest importance to the central office, with this bureau, being established without delay, so that it may be ready by the end of the war to deal with the needs of demobilised medical officers and of students from the Dominions, India, the Colonies and foreign countries.

14. The administrative arrangements of the existing British Postgraduate Medical School will have to be adapted to the conditions of federation. The constitution of the governing body would remain as it is at present; it is well suited to a federal organization. Its functions, however, will have to be modified to those of a co-ordinating and grant-distributing body for all the institutes, including that at Hammersmith, which make up the school. It should have the assistance of a finance and general purposes committee and of a central school council, the former, as at present, composed of members of the governing body of the school and the latter consisting of representatives of the teaching staffs of the various federated institutes, including the Hammersmith Post-graduate Institute. The school should have a dean who would not be associated with any of the individual institutes.

15. It is desirable that legally, each institute should be separately incorporated. The "Hammersmith Post-graduate Institute", like the other institutes of the school, should have its own governing body, academic council, and dean. The fact that there may be differences in the schemes of management of the various special institutes federated with the school is not of importance at the present stage.

16. Subject to the maintenance of university standards, each of the institutes should have a wide measure of freedom in deciding its educational policy; but it would be desirable that on questions relating to the creation of and appointment to professorships and readerships, the recognition of teachers, approval of courses, and matters affecting more than one institute, the normal channel of communication with the University of London should be through the governing body and central school council of the British Postgraduate Medical School.

17. Likewise, each institute should be financially independent, subject to the governing body of the school being the body through which each institute applies to the University of London for grants. The expenses of the central office of the school should be financed separately and not charged to the funds of the various institutes.

18. All the teachers at the various institutes should be on the staff of the British Postgraduate Medical School. The selection and appointment of professors and readers would be made in accordance with the usual practice of the University of London. For the selection of the other teachers it is desirable that the school should set up an advisory selection committee which would function for all the institutes of the school on similar lines to the corresponding committee in an undergraduate teaching centre. This committee might consist of nominees of the University of London, of the governing body of the British Postgraduate Medical School and of the institute at which the appointment under consideration would be held. Provision should be made for the inclusion of a person or persons with special knowledge of the subject to which the appointment relates. The various hospitals associated with the institutes of the school would no doubt find it advantageous to use this committee in selecting all members of their medical staffs above the grade of registrar. In every case the power of appointment would remain with the governing bodies of the institute and hospital concerned.

19. The British Postgraduate Medical School should be entitled to enrol students, but the admission of students to any institute should be subject to the approval of the dean of the institute at which these students wish to attend and should be controlled by the governing body of that institute.

20. The University of London and the present governing body of the British Postgraduate Medical School are in favour of a scheme of substantially the nature outlined. The next question to be considered is how this scheme can be carried into effect. Leaving apart questions such as the amendment of the charter of the present British Postgraduate Medical School, with which it is not necessary for us to deal further, there are two main problems. The first concerns the relations between the British Postgraduate Medical School in its reconstituted form and the post-graduate institutes that are already schools of the University of London (these constitute classes (iii) and (iv) in paragraph 2 above). The second relates to other post-graduate institutes that are in existence or should be established.

21. With regard to the first problem, our view differs to some extent from that of the governing body of the British Postgraduate Medical School, which is prepared to agree that the existing post-graduate schools should remain separate schools of the University and not become constituent units

of the British Postgraduate Medical School. We, on the other hand, attach the greatest importance to these institutions, with the exception of the London School of Hygiene and Tropical Medicine and the Lister Institute of Preventive Medicine, being federated to the British Postgraduate Medical School. Indeed we consider that their federation should be the first step in the carrying out of the scheme. Our reasons are as follows:—(i) the British Postgraduate Medical School will not attain the position it should unless it covers all branches of Medicine; (ii) the existence of two types of post-graduate institutes in London, similar in all respects except that one is an independent school of the University and the other is a constituent part of the British Postgraduate Medical School, would be most undesirable and would seriously impede the organization of post-graduate education in London. False ideas about differences of status would be engendered. Institutes that would otherwise be willing to join the British Postgraduate Medical School might refrain from doing so in the hope that they would qualify for independent admission as schools of the University. There would not be any advantage to be gained in an institute of psychiatry, like that at Maudsley Hospital, being a separate school of the University, while an institute of child health based, as we understand has been proposed, on the Hospital for Sick Children and the obstetrical department of Hammersmith Hospital was a constituent part of the British Postgraduate Medical School; (iii) the individual post-graduate institutes will gain more by being constituent parts of the British Postgraduate Medical School than by being independent schools of the University. We, therefore, press strongly that the existing post-graduate medical schools of the University, with the two exceptions named, should become federated to the British Postgraduate Medical School as a start in the latter's reconstitution.

22. We have excepted the London School of Hygiene and Tropical Medicine and the Lister Institute of Preventive Medicine from our proposal, because they are institutions of an entirely different nature from the others, being primarily non-clinical institutions. The British Postgraduate Medical School and its constituent institutes would be predominantly clinical institutions, based on post-graduate hospitals.

23. With regard to other post-graduate institutes which are in existence or should be established, the aim should be to have, at least as a beginning, one institute in each of the principal special subjects. Each of these institutes should be attached to an appropriate special hospital. The relation of the institute to the hospital to which it is attached should be the same as that between an undergraduate medical school and its parent teaching hospital. The special hospitals in London vary much in size, in equipment and in their staffing. Most of them have not organized schools at the present time and are not under any obligation to conform to university standards. They are not eligible for grants from the University and lack the money to enable them to develop post-graduate education on the lines they would like. As a first step, at least one special hospital in each major special subject should be brought up to university standard in respect of staffing, accommodation and equipment, and should be assisted to establish an institute for post-graduate education and research. Each of these special hospitals would need to provide an adequate number of beds and a suitable out-patient department. It should have lecture rooms, library and reading rooms, and sufficient laboratory accommodation for the research work of both staff and post-graduate students. As each hospital or unit attained the desired standard and formed its institute, the institute should be federated to the British Postgraduate Medical School.

24. The three special hospitals (the Royal London Ophthalmic Hospital, the Hospital for Sick Children, and the National Hospital for Diseases of the

Nervous System) which at the present time have "recognized" teachers of the University on their staffs, and which enjoy an enviable reputation for the high standard of their work, should be among the first of the special hospitals to develop institutes on these lines and to federate them to the British Postgraduate Medical School. We understand that discussions have taken place between representatives of the governing body of the British Postgraduate Medical School and the representatives of these institutions, but that agreement has not yet been reached. We hope that the negotiations will be pursued, with mutual understanding, to a successful conclusion. A close association of the hospitals with the University through the British Postgraduate Medical School will make it possible for the University to consider; as and when appropriate, the establishment of professorships and readerships at the institutes of these hospitals, a course which would be beneficial to their educational and research work and to the development of the special branches of Medicine with which they are concerned.

Needs of the "Hammersmith Post-graduate Institute".

25. The "Hammersmith Post-graduate Institute" (i.e. the departments which at present constitute the British Postgraduate Medical School at Hammersmith Hospital) are in need of reorganization; increase in staff, and extensive additions to their accommodation. When the school was opened in 1935, the staff provided for each major department was for a professorial unit controlling 150 beds. In general, this unit consisted of a professor, reader, four assistants, and about six resident officers, of whom only the professor and reader had attained consultant status. It was recognized in the early years of the school's existence that this staff would not be adequate. Changes were under consideration in 1937, but it was decided to give the organization a further trial and the outbreak of war prevented further consideration of the matter.

26. The existing organization was modelled on the professorial units in the undergraduate medical schools. The differences between undergraduate and post-graduate teaching have shown that this model was not the best to follow. The post-graduate student requires a great deal of individual instruction from teachers of experience who can speak with authority on their own subjects. To remedy the present defects it has been proposed that each professorial department should be given control of 250 beds instead of 150, and that the staff should be increased, in particular by the addition of visiting physicians, surgeons and other specialists who are engaged for part of their time in private practice or who hold other hospital appointments besides their appointments at Hammersmith Hospital. Incidentally it may be noted that the scheme of staffing now proposed by the school is nearer to that recommended by the Chelmsford Committee than the scheme at present in operation.

27. Alterations and additions are needed in the hospital premises and school buildings. The financial crisis of 1931 led both the Government and the London County Council to reduce their capital grants towards the cost of constructing the school and improving Hammersmith Hospital from £250,000 each, as originally intended, to £100,000 each. As a result the building plans had to be modified in many directions. Inadequate accommodation has been a serious handicap to the work of the school. Extensions and alterations on a large scale were planned before the war, but were not carried out. The urgent requirements include lecture theatres, demonstration rooms and laboratories of various kinds, in both hospital and school buildings, staff rooms, and reasonable social amenities for staff and students, an enlarged library and museum, and an animal house of adequate size. The out-patient accommodation of the hospital is too small. In short, what the teaching

departments at Hammersmith Hospital need is the staff and accommodation which were originally proposed, and which no doubt they would have received but for the financial crisis of 1931. Proper provision for these departments must be made if plans for a comprehensive post-graduate school in London are to have any hope of success.

28. The establishment of the British Postgraduate Medical School was not only an experiment in itself but was also an experiment in utilizing for the first time a general hospital, controlled and managed by a local authority, as a teaching hospital. We think that the latter experiment has been a success; but we consider that the experience gained supports the view that the government and administration of a local authority hospital that is associated with a post-graduate school, as in the case of one which is the parent teaching hospital of an undergraduate school, should conform to the principles discussed in chapter 3, paragraphs 18 to 21. The London County Council has taken great interest in the conversion of Hammersmith Hospital into a post-graduate teaching hospital, and we hope that they will consider sympathetically the further changes necessary to ensure the complete success of the scheme.

University committee for post-graduate medical studies.

29. Certain of the general and special hospitals in London and the surrounding area included in group (f) in paragraph 2 above would not become part of the British Postgraduate Medical School. These hospitals should be used for various forms of post-graduate education, in particular for clinical assistantships and refresher courses. In view of this fact, we consider that the University of London, despite the existence of the British Postgraduate Medical School, will need a committee such as we have recommended in paragraph 16 of the preceding chapter, for universities generally.

Conclusion.

30. To put the scheme that has been outlined into effective operation will be a very big task. Though the clinical material is available a considerable amount of hospital accommodation will be needed. The various institutes will require well-equipped laboratories for both routine work and research. Whole-time professorships should be established and adequate paid staff, both medical and technical, provided. The task cannot be accomplished without support from public funds. If such support is forthcoming and all concerned have sufficient breadth of vision and goodwill, we are convinced that the scheme can be an outstanding success and that, at long last, London can become as it should, a great world centre for post-graduate medical education and research.

Chapter 20.

POST-GRADUATE MEDICAL DIPLOMAS.

1. The position with regard to the award of post-graduate medical qualifications in the form of higher degrees and diplomas is unsatisfactory. There are too many of these awards, and there is a considerable variation in standard, even in the case of qualifications in the same subject. Many of the diplomas encourage ill-grounded and immature specialization.

2. Excluding the fellowship and membership diplomas of the Royal Medical Colleges, which are a class apart, there are nearly 40 post-graduate diplomas awarded by bodies in Great Britain and open to medical practitioners.* There is one in anaesthetics (D.A.), one in child health (D.C.H.) and one in laryngology and otology (D.L.O.), all awarded by the English Conjoint Examination Board. A diploma in clinical pathology (D.C.P.) is awarded by the University of London. In obstetrics and gynaecology there are two,

* The award of some of these diplomas has been suspended during the war.

one (D.R.C.O.G.) awarded by the Royal College of Obstetricians and Gynaecologists, and the other (M.M.S.A.) awarded by the Society of Apothecaries. In medical radiology there are four diplomas,† in addition to the fellowship of the Faculty of Radiologists; three are awarded respectively by the Universities of Edinburgh (D.M.R.), of Liverpool (D.M.R.E.) and of London (D.M.R.), and one (D.M.R.) by the English Conjoint Examination Board. The University of Oxford and the English Conjoint Examination Board each award a diploma in ophthalmology (D.O.). Diplomas in public health are awarded by most of the universities of England and Wales, by the four Scottish universities, by the English Conjoint Examination Board and by the Scottish Triple Examination Board. There are also many diplomas in psychiatry: the Universities of Durham and Edinburgh have diplomas in psychiatry (D.Psy.), while the Universities of Leeds, London and Manchester and the English Conjoint Examination Board award diplomas in psychological medicine (D.P.M.). The University of Liverpool has a diploma in tropical medicine (D.T.M.), and another, which can be obtained by practitioners who already hold the D.T.M., in tropical hygiene (D.T.H.); the University of Edinburgh and the English Conjoint Examination Board each award a diploma in tropical medicine and hygiene (D.T.M. & H.).‡

3. All these diplomas are awarded on the results of examinations. Except in the case of diplomas in public health, in respect of which the General Medical Council has certain responsibilities, no machinery exists for equating standards even between diplomas awarded in the same subject. The general standard may be indicated by a few examples of conditions of entry.

Diploma in child health (English Conjoint Examination Board).

Candidates must have been resident medical officers for 6 months in a recognized children's hospital or department, or have acted as clinical assistants in either for not less than 3 hours on 2 days a week for 12 months.

Diploma of clinical pathology (University of London).

Candidates must have completed an approved course lasting at least 12 months as whole-time workers under the supervision of the head of the pathology department of one of the colleges or schools of the University.

Diploma in laryngology and otology (English Conjoint Examination Board).

Candidates may take part I of the examination at any time after obtaining a registrable qualification or its equivalent. Entry to part II is conditional upon passing part I and completing one year of special study of the ear, nose and throat, attending during this period the clinical practice of a recognized hospital or department, and receiving instruction in pathology and bacteriology.

Diploma of medical radiology (University of Edinburgh).

Candidates are required to pursue a course of full-time study extending over 1 academic year. Before commencing the course they must have had at least 2 years' post-graduate experience, including a resident surgical appointment in hospital for not less than 6 months and at least 18 months' general clinical experience.

Diploma of medical radiology (English Conjoint Examination Board).

Candidates have to attend a full-time course extending over 1 academic year. They may do so at any time after obtaining a registrable qualification.

Diploma in psychological medicine (University of Leeds).

Candidates must have acted as resident clinical clerk or assistant medical officer in a recognized mental hospital for at least 6 months and must attend approved courses of instruction in the subjects of examination.

Diploma in psychiatry (University of Edinburgh).

Candidates must have held a resident appointment in an approved mental hospital or mental deficiency institution for 1-year, or have held a 6 months' residential appointment in such a hospital or institution and have had 6 months' practical study of nervous diseases in an approved general or special hospital.

† The University of Cambridge ceased to award its diploma in medical radiology and electrology in 1942.

‡ The diploma in bacteriology has not been included since the possession of a registrable medical qualification is not an essential requirement.

4. It will be clear from these typical examples that the post-graduate experience that a candidate is required to have obtained before presenting himself for examination for one of these diplomas is very much less than the Royal Medical Colleges and other interested bodies consider should be required in future before a medical practitioner is recognized as of specialist status (See chapter 17, paragraph 7).

5. Assuming that, in future, machinery is established for determining the standard of specialist status and for prescribing the post-graduate training and experience to be obtained before a candidate can qualify for that status, what purposes will be served by a post-graduate diploma? There are two possible purposes, one to serve as a qualification that a specialist trainee has to obtain; the other to be a qualification for practitioners who are not recognized as specialists. The question of whether or not it is desirable to prescribe a post-graduate diploma as a qualification to be obtained by specialist trainees is one on which we do not express an opinion; but should any such diploma be so prescribed, it will be evident from previous statements that the standard required of candidates will have to be much higher than is demanded under existing conditions. Further, since presumably only one grade of specialist will be aimed at in any branch, and every endeavour will be made to achieve an approximately equal standard in the various branches, it is desirable that the award of these diplomas should be concentrated in the hands of as few bodies as possible, and that the practice of having a number of competing diplomas should be discouraged. In the light of these considerations, we have come to the conclusion that the award of all post-graduate medical diplomas, other than those in public health, clinical pathology, bacteriology and tropical medicine should be undertaken solely by the Royal Medical Colleges who would then be free to bring the standard of such of these diplomas as may be required for specialist trainees into relation with the standard determined for specialist status. The diplomas that have been excepted should in our opinion be awarded solely by the universities providing the courses of instruction in preparation for them.

6. So far as practitioners who are not specialists are concerned we are doubtful whether it is necessary or desirable to encourage them to acquire specialist diplomas. Our doubt relates to the award of diplomas that give rise to misconceptions in the minds of the public or of appointing authorities. We do not imply that practitioners should be discouraged from enlarging their knowledge and experience of certain branches, in ways referred to in chapter 18, paragraph 14.

Chapter 21.

MEDICAL RESEARCH.

1. In all fields of thought and activity there is apparent a keen awareness of the need to encourage and assist those who have the flair to undertake the task of searching for new knowledge. Medicine is no exception. The problems of health and disease that are crying for solution are innumerable. "Although in the absolute sense the amount of knowledge possessed is impressive, relative to what is desirable, and to what should at no very distant date be won, reflection shows that it is still very small". "This may readily be apprehended if on going into a general hospital ward we ask ourselves the simple question, as we pass from one bed to another, why is this person suffering thus while we are not? Only rarely can that simple question be answered. Neither can we usually explain with finality how the symptom of which this or that patient complains is brought about".*

* Memorandum of evidence from Sir Thomas Lewis.

2. A community that wishes to promote research must do two things. First and foremost it must find and train the men who have the ability and impulse for scientific inquiry. Second it must create the most favourable conditions for their work and give them the tools they need.

RECRUITMENT OF WORKERS FOR MEDICAL RESEARCH.

3. It should be emphasized that scientific workers in other than medical fields have a valuable contribution to make to medical research. At the same time medical teaching centres should be excellent recruiting and training grounds for medical research workers provided they are, as they should be, centres of medical research as well; for research is a stimulus to good teaching. It is important that opportunities should be afforded for the exchange of ideas and the discussion of problems between research workers in different branches of science and nowhere are these opportunities more likely to be found than within a university.

4. How can the medical teaching centres best fulfil their function of producing research workers? To answer this question we cannot do better than quote from the evidence of Sir Thomas Lewis. The following extract appeared in his memorandum of evidence under the caption "Recruitment of workers and organization of research":—

"It is of first importance to understand that successful research depends upon the man engaged in it. This principle receives frequent lip service, but it is insufficiently ingrained in discussions and actions relating to the promotion of original work. Corporations may plan, panels of medical men may scheme, the charitably inclined and public funds may provide elaborate facilities; the wrong man is chosen, or the right man is chosen and put to the wrong *ad hoc* job, and the whole comes to nought. Meanwhile in some cupboard of a place, ill-equipped and unfinanced, his mind fanatically centred on a problem of his own choice, a man hitherto unsuspected of the gift, reveals important truths. That is not to say that men should be put to work in cupboards or starved of equipment. But it throws the emphasis where it belongs, as it would not be thrown if this section were written under the caption 'Organization of research and recruitment of workers'. Recruitment should take precedence and organization proceed to meet the needs of the worker as these arise; that should be the almost invariable principle. The usual failure of *ad hoc* organization, other than as it affects work farther exploring original discoveries, is very widely recognized; yet these schemes continue to be frequent.

Many quite legitimately doubt if organized research is not a mistake. Unquestionably it has led to a flood of second and third rate work and writing. And here it is to be noted that a flood of such work is often not merely harmless, it may be very harmful in obscuring channels of progress. The idea prevalent in the teaching medical institutes of some countries, that a showing of 'research' is an obligatory permit of entry to the staff is foolish. The idea is prolific of rubbishy work and it overlooks the obvious fact that men without aptitude for original work may nevertheless possess wide knowledge and conspicuous powers of discrimination, qualities which go far towards the making of first rate teachers. The fundamental point is to allow and encourage men to develop their own aptitudes.

Men with the aptitude for research are among the unusually intelligent; but men of unusual intelligence have not always the flair, neither is the flair always conspicuous till it is proved. The right men are often diffident. How then to recruit workers? The sound answer is probably that in most

instances they should recruit themselves. Most men with a real itch for research will sometimes do a little audible scratching. Also, since the itch is not spontaneous, a stimulus should be applied. The wisest process of stimulation is probably applied to students collectively, especially to the more intelligent, rather than to students individually. The individual stimulus too often excites an enthusiast; and a wrong choice may be very wasteful to both parties affected by it. The main stimulus should be educative; the appropriate display of past work and of present ideas. In addition students should be shown unobtrusively what the chance of work offers. The space of a simple bench and of such equipment as will permit a beginner the chance to feel his way in such beginning should be the student's at request. But at this stage encouragement is rarely desirable; most students who accept the chance quickly fade out when they face realities. If they have any real aptitude, they will at least make a showing; then is the earliest time for active encouragement, by simple discussion and suggestion; but the best men will least need it. The request for such bench facilities, for use in spare time, should be denied at no stage of a student's career; occasional attendances are all that can be expected before qualification, enough to make a beginning or to maintain contact. A student showing obvious promise, but over-eager, should be asked and advised about its effect on his general training."

5. A graduate who shows promise of developing into a successful research worker should have opportunities of learning the methods of putting ideas to the test and should be given reasonable facilities to do some research work on his own. The subject of research should usually be chosen by the graduate himself, the head of the department advising upon its feasibility and exercising an interest and stimulating control. Again we quote from Sir Thomas Lewis's memorandum:—

"All such workers in a medical school should have routine duties, preferably in teaching, so that they may not become completely absorbed in research nor completely dependent for their contentment upon results won. The young worker's future career should come up automatically for discussion at intervals of not more than 12 months. Many men who start to do research will not succeed, others will succeed in a measure which does not justify their continuing. Thus, for some years it may not be clear whether a particular man is best adapted to research, to teaching, or to practice. Thus, it is very important that the system should be flexible, so that he may come to follow his proved rather than suspected aptitudes. No man is prudent in concentrating all his thoughts upon research, or in pledging himself to a research career, before his work is receiving clear recognition from recognized authorities outside his own school. Heads of departments should raise this point and discuss it frankly from the standpoint of the worker's advantage on appropriate occasions. The decision finally to embark on a research career should always be the man's, but he is entitled at this stage to know how his work is being assessed by others.

When a worker has proved his research ability, has chosen research as a career, and has been accepted for such, he should be given reasonable security in this career. This means that he must be able to see before him the prospect of increasing facilities and responsibilities, provided by appointments, until he reaches a level where his abilities find full scope and where his remuneration is adequate."

THE POLICY OF THE MEDICAL RESEARCH COUNCIL.

6. The Medical Research Council is the body appointed by the Government to assist, develop and co-ordinate medical research in this country.

Under a charter granted in 1920, the Council is responsible to a special committee of the Privy Council, with the Lord President of the Council as chairman and the Ministers who are mainly responsible for health administration as members. Of the twelve members of the Medical Research Council, nine are appointed by virtue of their scientific qualifications and are largely drawn from the staffs of universities and medical schools. The appointment of all the members is made by the Committee of the Privy Council, in the case of the scientific members, after consultation with the Medical Research Council itself and the President of the Royal Society for the time being. The Council's expenditure is met mainly from a direct Parliamentary grant-in-aid, but the Council also receives, or advises regarding the disposal of, funds provided from private sources.

7. The Medical Research Council has submitted to us the following statement regarding the two methods which it has used for the promotion of research.

" Research Establishments and Staff.

The Council use two methods for promoting research. The first of these is by appointing selected workers to their own scientific staff, established or temporary. Most of these posts are for whole-time work, but a few are on a part-time basis.

By no means all the members of this staff work in the Council's own premises. The Council indeed maintain only the National Institute for Medical Research and one smaller laboratory as completely self-contained establishments. They maintain several units in other institutions where they have been allotted accommodation. They maintain several more, particularly those for clinical research, jointly with the institutions in which these are placed. In addition, various individual members* of the staff are 'seeded' in university or other departments in no way under the Council's control.

It will thus be seen that, with one important exception, the Council's policy has been not to set up institutions of their own but to supplement the research facilities and resources of universities, medical schools and hospitals. Members of the staff appointed by the Council for this purpose are chosen for their special qualifications to undertake research in particular fields of study. They are placed, by agreement, in institutions which seem to offer appropriate opportunities. They are provided by the Council with the necessary assistance and research expenses. In the case of jointly maintained units and of 'seeded' individuals, accommodation and general facilities are provided by the institution. The heads of units and other senior members of the staff are given wide freedom in their choice of problems for study and in the conduct of their work.

This method of promoting research has proved highly successful, and the policy will be extended as opportunity permits. The institutions which house or jointly maintain the research units develop pride in them and are as a rule generously helpful in furthering their work. Apart from the actual contributions to knowledge made by these units, their presence is invigorating to the whole work of the institution, which in its turn may be stimulating to the research workers. Members of unit staffs or "seeded" workers, although in the Council's service, are commonly given some honorary status in the institution. They are also encouraged by the Council to take some part in the ordinary work of the institution, i.e.; teaching in a university or treatment and teaching in a hospital.

* A list of these members was appended.

It is emphasised that the determining factor in promoting research along these lines is the availability of the right personnel. If a unit is established under the direction of a particular worker, it is not necessarily kept in being after his services are no longer available; it ceases to exist unless a suitable successor can be found. Similarly, a unit is not established, however desirable it may appear in principle . . . if the Council are unable to find the right leader.

Research grants.

The second method used by the Council for promoting research is by making grants to workers in universities, hospitals and other institutions. These grants are temporary, but they are renewable from year to year and are in practice often continued for a long time. Grants for personal remuneration are not ordinarily continued for more than three years in respect of one individual, but exceptions even to this rule are freely made when circumstances warrant.

Grants are not made to institutions as such, or in aid of general programmes, but always to individuals and for specified lines of investigation. The recipients may be members of the staffs of institutions, or they may be attached workers. A grant may be for the personal remuneration, whole-time or part-time, of the chief worker or of a research assistant—but a grant of this kind is never made to the holder of any whole-time post. Or a grant may be made for the special expenses of the approved research, including apparatus, materials, experimental animals and subordinate assistance,—but never for overhead expenses or for general facilities such as any institution properly equipped for research may be expected to provide for those working in it.

Grants are made on the basis of applications. The initiative thus comes from the individual worker or his chief, and the Council's decision to give help depends on the suitability of the worker and the choice of subject. Clearly, this method of assisting research is more uncertain than that of establishing research units. Sometimes it leads to great success, especially when the application comes from a university professor or other worker of established reputation. It also gives young men a chance to try their skill at research; grants of this kind are probably never entirely wasted.

In addition to numerous research grants, the Council award a few studentships specifically for training in methods of research in particular subjects, such as clinical medicine, experimental pathology, medical psychology or tropical diseases. The Council also had, for many years before the war, the award of Rockefeller Fellowships tenable in the United States or elsewhere abroad."

8. The parliamentary grant-in-aid for the work of the Medical Research Council has risen from £125,000 in the year 1920-21 to £250,000 (recommended) in the year 1944-45. The additional income available to the Council in normal years is about £20,000. In the year 1938-39, out of a parliamentary grant-in-aid of £195,000 (augmented by certain balances and credits) the council allocated about £57,000 to research grants, studentships and fellowships to workers in universities, hospitals and institutions in the United Kingdom. About £11,000 more was expended in this way from other funds at the Council's disposal. In the same year the council allocated approximately £46,000 to research by their own staff working in universities, hospitals and other institutions, that is to say elsewhere than in the National Institute for Medical Research.

PROVISION FOR RESEARCH IN MEDICAL TEACHING CENTRES.

9. There is no dispute that the medical schools, teaching hospitals and post-graduate institutes have three important functions in relation to medical research, namely (i) to discover and train future research workers; (ii) to encourage and facilitate research work by their teachers; and (iii) to house special research units and workers. We have to consider what provision they should make and what financial assistance they require. The provision in respect of the first two functions involves staff, accommodation and access to patients. The regular teaching staff of a medical school must be of such a size that the members of it have adequate time to undertake original work. An interest in research work should be one of the qualifications looked for in candidates for appointment to the staff. The staffing scheme must allow for the attachment from time to time to any department of persons who show promise of developing into successful research workers. The teachers should be provided with technical assistance for their research work as well as for their other duties. Laboratory accommodation and general equipment both in medical school and teaching hospital must include, in addition to what is required for routine work and teaching, the facilities which the staff require for their original investigations. Allowance for these facilities has been made in the statement in Appendix G. Senior whole-time research workers engaged on clinical research will have to have access to patients. When necessary they should be allocated a small number of beds for the purpose and be made responsible for the care of the patients admitted to them. Usually it is unsatisfactory for a man engaged in clinical research to have to rely upon patients in the care of another practitioner. Unless he is in a position to control therapeutic measures and the time of discharge, his research plans may be completely upset. No one is fit to undertake independent clinical research who is not adequately trained to undertake full responsibility for the care of patients.

10. The provision which has been indicated, though directed to the promotion of research, is necessary in order that the medical schools and teaching hospitals may be efficient teaching institutions. The cost must be regarded as part of their general educational expenditure and should be an item towards which grants made from public funds in aid of medical education are applicable. In other words grants from public funds for the support of medical schools and teaching hospitals must include what may be termed basic research grants.

11. Apart from this basic provision, extra grants will be needed from public and private sources for the support of special investigations. In the teaching centres, these investigations may be undertaken by regular members of the staffs of the centres or by research workers attached to the centres specially for the purpose.

12. It is a matter of self-interest that the community should give most liberal support to research work from public funds. At the same time it is important that research work should draw its inspiration from as many sources as possible. Vigorous initiative based on the provision of private benefactions should be encouraged. Such benefactions have played, and should continue to play, a vital part. So that the most fruitful use may be made of the resources available, the freest interchange of information between the various agencies sponsoring research work is essential.

13. The need for grants from the Medical Research Council for particular projects of research will be dependent upon the availability of men to carry

out these projects. The extent of the need cannot be foreseen for long periods ahead and may vary from time to time. In view of this fact we believe that it would assist the Medical Research Council, the medical schools and research workers if the funds placed at the disposal of the Council by Parliament were determined annually and not, as was customary before the war, on a quinquennial basis.

FACILITIES IN OTHER HOSPITALS.

14. Non-teaching hospitals of reasonable size, particularly those approved for pre-registration house appointments, should be used to the fullest possible extent in the arrangements for medical research. In the development of its facilities for investigational work, any such hospital should be eligible to receive assistance from public funds.

PART III—FINANCIAL CONSIDERATIONS.

Chapter 22.

THE NEED FOR AND DISTRIBUTION OF GRANTS FROM PUBLIC FUNDS.

1. The programme that we have outlined for the improvement of undergraduate and post-graduate medical education and for the promotion of research will involve medical schools, post-graduate institutions, and teaching and other hospitals in considerably increased expenditure, both recurrent and capital. Public funds and private benefactions are the sources from which the increased expenditure will have to be met. Higher charges to medical students would be hard to justify; the total fees for medical training are high and any change in them should be in a downward direction. From the accounts of the medical schools of the University of London (these schools, together with the Welsh National School of Medicine, are the only university medical schools that issue separate accounts) it appears that in 1938-39 medical students contributed, by way of tuition and other fees, a larger proportion of the total income of the schools than university students generally contributed to the income of universities. We know of no reason for thinking that the position was materially different in the other university medical schools.

2. In the past, there have been many generous gifts from private sources; but on the whole medical education does not seem to have been supported by private benefactors to the same extent as some other activities. We commend the claims of medical education to the notice of those contemplating gifts for the promotion of social well-being; but, while hoping that private gifts may increase, we think it is certain that the medical schools and other institutions concerned will be unable to incur the necessary additional expenditure unless they receive much larger government grants.

FUTURE FINANCIAL NEEDS.

University medical schools.

3. It is not possible to give more than an approximate estimate of the total expenditure of the medical schools of Great Britain before the war. There was considerable diversity in the financial arrangements, and in the case of those medical schools that are faculties of universities, expenditure on certain items (for example, administration, maintenance of premises, libraries, and

museums) as a rule formed part of the general expenditure of the university as a whole and was not apportioned among the various faculties of the university.

4. Confining attention to the university medical schools, and making estimates where actual figures are not available, it has been calculated that the total ordinary expenditure of these schools in 1938-39 was in the neighbourhood of £1,200,000. Of this sum, about one-half was expended on teachers' salaries, nearly one-fifth on the maintenance of laboratories, including the remuneration of technical assistants, just over one-eighth on upkeep of premises and the remainder on various items, including libraries and museums. The amount expended on teachers' salaries was materially affected by the fact that most of the senior clinical teachers received little or no remuneration for their teaching work. The calculations have been based on information given in the returns which the various institutions made to the University Grants Committee, supplemented by particulars supplied in response to our questionnaire.

5. The foregoing estimates do not include expenditure incurred by teaching hospitals in providing facilities for teaching and research except in so far as a very small amount of such expenditure was met in a few cases from funds of the medical schools. The expenditure of teaching hospitals is considered in paragraphs 11 to 26 below.

6. The exact amount of the total grants from public funds towards the ordinary expenditure of medical schools is not known. The medical schools of the University of London receive recurrent and capital grants from the Court of the University, this body making the grants from a pool formed by block grants received from the University Grants Committee and from the London County Council. The general expenses of the university medical schools outside London are met from the ordinary income of the universities, grants received by each university from public funds being merged into such income. As already noted, some items of expenditure are treated as central, and not as faculty or departmental charges. To arrive at an estimate, we have assumed that of the grants from the University Grants Committee and local authorities to the universities in Scotland, the English provinces and Wales, the share received by the medical schools of these universities was roughly given by the proportion which the expenditure of these schools bore to the total expenditure of their universities. On this assumption and including the grants received by the London medical schools from the University of London, it appears that the total contribution, in the years immediately preceding the war, from the University Grants Committee and local authorities towards the cost of university medical schools, was in the neighbourhood of £700,000 a year. This sum is exclusive of payments made by local authorities "for services rendered" and does not include expenditure on scholarships and maintenance grants awarded by public authorities to medical students.

7. **Current expenditure in future.** At the present stage a detailed statement cannot be submitted on the financial effects of our various proposals. We have received statements on future financial needs from the medical schools and have made calculations ourselves. In these calculations, estimates of expenditure on teaching and ancillary staff have been based upon staffing arrangements and scales of salary which we consider would be reasonable. Examples of the schedules of staff are given in Appendix I and the levels of salary have been indicated in chapter 4, paragraphs 60-67. Of necessity all estimates are purely conjectural, but a general assessment, in

the light of information received and of calculations made, shows that during the next ten years the annual expenditure of the 26 university medical schools together must steadily increase until it reaches a total figure of from £3,000,000 to over £3,700,000, according as to whether the schools remain at their pre-war sizes or expand to meet an increased demand for doctors. Total expenditure at this level will mean an *addition* to pre-war expenditure of between £1,750,000 and £2,500,000. This estimate does not include such portions of the salaries of clinical teachers as may be paid by teaching hospitals in respect of their clinical services in the hospitals as distinct from their teaching work, but it assumes that those clinical teachers who hold whole-time university appointments will be paid entirely from medical school funds. The estimates are also exclusive of the grants which we recommend in paragraph 21 teaching hospitals should receive on account of the educational and research facilities they provide.

8. The principal increase will be in respect of payments to teachers and ancillary staff. Understaffing will have to be corrected; the scheme of staffing for the clinical part of the course brought nearer to the normal university pattern, more whole-time teachers being appointed and salaries being paid to part-time teachers; adequate technical and secretarial assistance will have to be provided; and proper provision will have to be made for training the specialists needed for the national health service. If the various university medical schools remain at their pre-war sizes, the increase in their expenditure on teaching and ancillary staff is likely to be of the order of £1,000,000 a year. The major part of this increase will arise from the proposal to bring the system of staffing and remuneration of teachers engaged in the clinical part of the course into line with the system in vogue in all other branches of university life. Expansions in the entries of students to the medical schools may bring the increase in the expenditure on staff to £1,500,000, or more, a year.

9. Of the other items contributing to increases in total expenditure, the main ones will be (i) departmental and laboratory maintenance, (ii) the maintenance of premises, (iii) expenses in connexion with the provision of students' residences and residential training, and (iv) fellowships and scholarships.

10. **Future capital expenditure.** Statements prepared by the medical schools show that to remedy existing deficiencies in accommodation and equipment and to make provision in some schools for larger numbers of students, the schools are likely to need, on the basis of pre-war costs, a sum not less than £4,000,000 for capital expenditure within 10 years after the end of the war. The provision of accommodation for medical students in halls of residence would add up to £1,000,000 to this sum.

Teaching hospitals.

11. In the parliamentary statement which was made by the Minister of Health in October 1941 (see Preamble, paragraph 14) it was stated that "special arrangements for dealing with the teaching hospitals by way of increased educational grants" were in contemplation. The White Paper on "A National Health Service" indicates (first paragraph, page 24) the Government's intention to give special consideration to the question of financial assistance to hospitals in respect of teaching work.

12. The provision by a hospital of facilities for clinical teaching and research involves the hospital in additional expenditure, apart altogether from remuneration of medical staff. The extra cost is both capital and recurrent in nature.

13. **Recurrent expenditure.** The increased running costs arise from the more complex organization of a teaching hospital and from the fact that the outlay on various items has to be greater to meet the requirements of teaching and research. The nursing staff has to be larger; sisters and nurses are required to accompany members of the medical staff on teaching rounds in the wards and to be in attendance on patients in out-patient departments and during clinical examinations and demonstrations. Additional porters, orderlies and other domestic staff are needed. More numerous and sometimes costly investigations often have to be carried out for educational and research purposes. Out-patient costs and laundry costs are increased. The outlay on various supplies such as drugs, dressings, instruments, is higher. The cost of domestic services, including cleaning, heating and lighting, is greater.

14. The foregoing are illustrations of the items on which increased expenditure can be traced directly to the provision of teaching and research facilities. We have not attempted to frame a comprehensive list.

15. Although it is clear beyond dispute that extra expenditure is incurred by a teaching hospital on account of its educational and research activities, there is general agreement that, on the basis of existing data, accurate estimates cannot be made of the amount of such extra cost. It is possible to prove that teaching hospitals cost more than non-teaching hospitals, but it is impossible to prove how much of the extra cost is attributable to their teaching and research functions. To some extent the higher cost is due to a higher standard of medical and nursing care. The evidence that we have received from the teaching hospitals of Great Britain, and the discussions that we have had with representatives of the London County Council, support this conclusion. The London County Council has been concerned to examine the question in connexion with the association of its Hammersmith Hospital with the British Postgraduate Medical School. One of the financial clauses of the agreement between the Council and the School provides that if, in any financial year, the Council is of the opinion that the maintenance costs of the hospital have been rendered excessive by reason of the attachment of the School to the hospital, the school authorities should pay to the Council in respect of that year such a sum as shall be agreed to represent the proportion of the additional cost payable by the School, having regard to all the circumstances of the case. The interpretation of this clause in practice has proved to be very difficult. In 1938, a joint advisory committee, consisting of representatives of the School and officers of the Council, was set up with a view to evaluating the additional cost. Among other things, this committee instituted a system of comparative costings between Hammersmith Hospital and another large comparable general hospital of the Council. Owing to the war, the Committee had to be disbanded before it had arrived at any final conclusions, but the information which it had obtained showed that there were definite indications of increases in certain items of expenditure at Hammersmith Hospital compared with the other hospital, but that, apart from medical staff, it was impossible to determine with any degree of exactitude what proportion of the excess cost could be directly attributed to the British Postgraduate Medical School.

16. In the Scottish teaching hospitals contributions towards the cost of the teaching and research facilities are obtained through the system of "hospital tickets." A student is required to make a direct payment to the teaching hospital for a hospital ticket, which entitles him to attend the wards, operating theatres and out-patient departments during his undergraduate training, and in some cases for the rest of his life. At the teaching hospitals in Edinburgh, the fee charged for a hospital ticket by the Edinburgh

Royal Infirmary is £18, by the Hospital for Sick Children 1 guinea, and by the Maternity Hospital 2 guineas. In the case of both the Western and Royal Infirmarys in Glasgow, a student has to pay, in addition to clinical class fees, a hospital fee of 1½ guineas for each term of the clinical part of his course.

17: From the information before us it appears that the sums received from the sale of hospital tickets are merged into the ordinary incomes of the hospitals and are not kept apart and used to provide proper amenities for students or to build up reserves from which to meet future capital expenditure in the interests of teaching and research.

18. We consider that the system of a composite fee should be introduced by all medical schools, and that the practice in Scotland of requiring students to make direct payments to the teaching hospitals should be discontinued. Under the composite fee system, it would be open to the universities to make agreed contributions from their fee income to the teaching hospitals in respect of amenities for students. These hospitals would also be entitled to a share in the Exchequer grants which we recommend in paragraph 21 below.

19. The contribution which the teaching hospitals make to medical education and research is indispensable, and we are unanimously of the opinion that they should receive educational grants-in-aid from public funds. They do not do so at the present time. The standard of medical education and research may suffer if the teaching hospitals are entirely dependent upon voluntary contributions for the money with which to meet the cost of providing facilities for teaching and research. Since this work is national and not local in character—students from any medical teaching centre going to all parts of the country after qualification and the results of research work being enjoyed by the whole community—such grants to the teaching hospitals should, in our opinion, come from central and not local sources. The grants should be in respect of recurrent and capital expenditure. The machinery for their distribution is considered later.

20: Various proposals have been submitted to us regarding the methods by which the amount of the recurrent grants might be calculated. These proposals include the following suggested bases of calculation:—the average difference in cost per in-patient week and per out-patient attendance between teaching and non-teaching hospitals; the average difference in cost per available bed; a percentage of the total expenditure of teaching hospitals; a payment per student receiving clinical instruction; a formula which takes into account the number of available beds, the ratio of students to beds available for clinical instruction, the range of out-patient departments and other services; and, lastly, a similar basis to that used under the Emergency Hospital Scheme for payments to voluntary hospitals. Consideration of these various suggestions involves technical accountancy questions on which, as a committee, we do not feel competent to reach a conclusion. It is clear, however, that there is an arbitrary element in each basis and that none is free from criticism.

21. In these circumstances we make the following recommendations with regard to *recurrent* educational grants in aid of teaching hospitals:—

(a) That, as soon as possible, arrangements should be made for the adoption throughout the hospital service of Great Britain of a uniform system of hospital accounts, including a costing system so devised that it may furnish data for the assessment of the extra cost to a hospital of providing facilities for teaching and research,

(b) That, until such time as the system of accounts referred to in (a) above has been in operation sufficiently long to provide a more satisfactory assessment of the extra cost incurred by teaching hospitals in respect of teaching and research facilities, an annual sum equivalent to £500,000 at pre-war values be allocated from central Exchequer funds for distribution to teaching hospitals towards recurrent expenses, other than on payments to medical staffs, incurred by them in providing facilities for medical education and research. This sum might be apportioned among the various teaching hospitals on the basis of either their total ordinary expenditure in 1938, or of the number of full-time undergraduate medical students receiving clinical instruction, or on some other agreed basis.

(c) That, thereafter, the amount of the recurrent grants in respect of the educational and research functions of teaching hospitals be fixed, in the light of the data then available, on applications made by medical schools on behalf of their respective medical teaching centres.

22. The grants proposed in the foregoing recommendations would be additional to grants which teaching hospitals would be entitled to receive from central and local sources on account of participation in the national health service. Under the proposals for this service outlined in the White Paper, the latter grants may include agreed sums in aid of salaries for specialists. This possibility, and also the fact that the teaching hospitals will receive clinical services from whole-time professors and other teachers whose salaries are paid entirely by the medical schools, has led us to exclude remuneration of medical staff as an item to which the proposed grants should relate.

23. The total amount suggested for the initial period has been arrived at on an arbitrary basis. It represents approximately 12½ per cent. of the total ordinary expenditure of teaching hospitals in Great Britain in the year 1938.

24. As teaching work is developed in associated teaching hospitals it will become necessary for some contributions to be made through the medical schools towards the expenditure of those hospitals.

25. **Capital expenditure.** Capital expenditure has to be incurred on accommodation and equipment for teaching and research. For example, laboratories are on a scale larger than is normally required, specially designed consulting rooms and out-patient examination rooms have to be provided, together with such accommodation as lecture theatres, demonstration rooms, common rooms and cloak-rooms. Bed-rooms are needed for students receiving resident training. As we have already recorded (see chapter 3, paragraph 56 and Appendix G) in most teaching hospitals the accommodation and equipment for teaching and research falls far below ordinary requirements. At the present stage it is impossible to attempt more than a guess as to the expenditure necessary to remedy the deficiencies. On the basis of statements that we have received through the medical schools and of estimates that we have made in the light of our various recommendations, it is clear that within 10 years such expenditure will amount to several million pounds.

26. This forecast includes the cost of residential accommodation for students in training and for pre-registration house-officers. It does not relate to accommodation and equipment for ordinary hospital services. The latter raises a problem to which we consider it desirable to draw attention. The size of a teaching hospital and the services which it provides cannot be decided solely

by the hospital needs of the immediate locality. The requirements of education and research are also an essential consideration and these may be influenced by national as well as local needs. For example, the national need for more doctors may necessitate larger entries of students to many of the existing schools and in turn an expansion in the size of the parent teaching hospitals of these schools. Again, the building of medical teaching centres as compact geographical units, such as exist in certain other countries and as we have recommended with a view to increased efficiency in the training arrangements and to the production of better doctors, may involve hospital rebuilding to a greater extent than would be dictated by purely local hospital needs. We submit that, in whatever financial arrangements the Government may make concerning capital expenditure on the hospital service, due regard should be had to the fact that teaching hospitals may have to incur capital expenditure on accommodation and equipment which, though not used exclusively for teaching and research purposes, are needed in the interests of teaching and research. From the standpoint of education and research it would be undesirable for the provision of such accommodation and equipment to be dependent entirely upon voluntary contributions or local resources. Because of their participation in the tasks of medical education and research, teaching hospitals have a national as well as a local status.

Hospitals approved for pre-registration house-appointments.

27. We do not expect that the non-teaching hospitals approved for pre-registration house-appointments will be involved in any large increase in expenditure in respect of holders of these appointments. Owing to the presence of pre-registration house-officers it may be possible in some cases to effect economies in the staff provided in the slightly more senior grades. In any case, these house-officers will do useful work in the hospitals and the value of this work must be offset against the expenditure on their remuneration, board and lodging.

Post-graduate medical schools and institutes and arrangements for refresher courses.

28. The most expensive proposal under this head is that outlined in chapter 19 for the development in London of an international centre of post-graduate medical education and research. We are not in a position to submit even tentative estimates of the cost of the whole scheme, but estimates received from the British Postgraduate Medical School show that for the development of the general institute at Hammersmith and for institutes of child health and ophthalmology, the capital expenditure may be between approximately £400,000 and £1,000,000, according as to whether temporary or more permanent arrangements are made, and that the annual expenditure may be increased by between £110,000 and £120,000 a year. Allowance must also be made for at least another five post-graduate clinical institutes, together with an institute of forensic medicine. The cost of these institutes cannot be estimated at the present time.

29. Estimates are not available for the proposed clinical research and post-graduate units at the University of Cambridge, but the capital expenditure may well be in the neighbourhood of £150,000 and the annual costs £30,000 to £40,000. No forecast can be made at the present time of the cost of developing post-graduate institutes in other universities.

30. The universities undertaking responsibility for the organization of refresher courses for general practitioners may need £30,000 a year for distribution to the hospitals at which these courses are held to meet the costs involved, if about 5,000 doctors a year attend. No allowance has been made for expenses borne by the doctors attending these courses.

Total of financial needs.

31. **Recurrent expenditure.** Totalling the requirements for various aspects of medical education and research, it appears that, apart from monies distributed by the Medical Research Council, the *additional* financial assistance required *annually* for undergraduate and post-graduate education, and the basic provision for research will amount (at pre-war values) within 10 years from the end of the war to at least £2,420,000 a year† if the undergraduate medical schools remain at the pre-war sizes, and to at least £3,190,000 a year† if they expand to meet a need for more doctors. These sums are made up as follows:—

(i) *Medical teaching centres*

(a) University medical schools (see paras. 7–9 above)

To meet *additional* current expenditure on:—

Remuneration of teaching and ancillary staff	£1,000,000 to £1,500,000*
	a year

Other items, mainly departmental maintenance, upkeep of premises, students' residences and residential training, provision for fellowships and scholarships

£750,000 to £1,000,000*
a year

Total additions

£1,750,000 to £2,500,000*
a year

(b) Grants, through University Grants Committee and universities, to teaching hospitals for teaching and research facilities (see para. 21 above)

Amount suggested for initial period

£500,000
a year

(ii) *Post-graduate medical schools and institutes*

including provision for refresher courses. (See paras. 28–30)

To meet *additional* recurrent expenditure

£170,000 to £190,000†
a year.

32. **Capital expenditure.** The estimated amount of capital expenditure likely to be required for medical teaching and research purposes within 10 years (at pre-war costs) is as follows:—

Medical Schools (see para. 10)	£5,000,000
Teaching Hospitals (see para. 25)	several million pounds
Post-graduate schools and institutions (see paras. 28 and 29)	£550,000 to £1,150,000†

"MACHINERY FOR THE DISTRIBUTION OF PUBLIC GRANTS.

33. As we have mentioned in earlier sections of our report, we attach great importance to the university medical school of each teaching centre being the body which is responsible for applying for and receiving grants from public funds in support of the educational and research work of the whole of the centre. We believe that such an arrangement is essential if, in educational activities, the centre is to function in the way we have described and if the medical school is to be in a position to exercise the influence it should in educational policy and arrangements. In consequence we propose (i) that the central distribution of Exchequer grants in aid of undergraduate and post-graduate medical education and the basic provision for medical research should continue to be in the hands of the University Grants Committee and that this Committee should also distribute Exchequer grants in respect of

* Dependent upon whether or not certain schools expand to meet a need for more doctors.

† Allowance must also be made for at least 6 other post-graduate institutes in London for which estimates of cost cannot be framed at the present time, and also for the development of post-graduate institutes at other universities. (See paras. 28–29.)

educational facilities provided by teaching and other hospitals; (ii) that in making its distribution of all such grants the Committee should, in accordance with its established practice, deal with the authorities of the various universities. In view of our belief that medical education must be a university education conducted in university institutions, the University Grants Committee is obviously the appropriate body for the central distribution of Exchequer grants. The universities would be responsible for submitting applications on behalf of their undergraduate and post-graduate medical schools and institutes, the teaching and other hospitals associated with such schools, and institutions incurring expenditure on post-graduate medical education under arrangements made with the universities. The medical schools that are colleges or schools of universities, that is to say the medical schools of the Universities of Durham, London and Wales, would not receive grants direct from the University Grants Committee, but, as at the present time, the universities in question would be the recipients of grants from the Committee and would make grants to the schools from the monies so received.

34. We hope that ultimately the University Grants Committee, in distributing recurrent grants, may be able to follow its normal practice of making block grants; but we consider that for a short period it would be advisable for the additional grants to universities for medical education and research to be separated, so far as possible, from the block grant for the rest of the universities' activities. We also suggest that during the same period the educational grants for the teaching hospitals (see paragraph 21 above) should be earmarked. Such a course would facilitate the new arrangements in the organization of medical education.

35. It has been represented to us that the educational grants to teaching hospitals should be made direct to the hospitals, either by the University Grants Committee or by some analogous body, the latter course being preferred. We are unable to support this view. These special grants to teaching hospitals are *educational* grants for the purpose of securing the provision of adequate clinical facilities required by the medical schools for teaching and research. In our opinion it is essential that they should be distributed by the same machinery as the grants to medical schools and that when the new arrangements are fully established the medical schools should have some voice with regard to the amount and utilization of these grants. Fear has been expressed that, if a teaching hospital receives the grants through its medical school, there will be the danger of ill-feeling and friction developing between the two bodies. Given the co-operation and goodwill necessary to secure the efficient functioning of a medical teaching centre, we do not think that there is much substance in this fear; but had we thought otherwise it would merely have strengthened our view as to the part which should be played by the medical schools in the distribution of these grants.

36. We propose that the University Grants Committee, in addition to distributing the capital grants for medical schools, post-graduate schools and post-graduate institutes should also distribute, through the appropriate universities, non-recurrent grants for the provision of teaching and research accommodation in teaching hospitals and other hospitals approved for pre-registration house-appointments. We exclude capital grants for purposes referred to in paragraph 26.

37. In view of the large sums involved and of the fact that hospitals as well as university institutions are concerned, we consider that for the distribution of these grants the University Grants Committee should appoint a special advisory panel consisting of persons with expert current experience of the requirements of medical education and of the needs of teaching hospitals.

CONCLUDING NOTE.

We wish to record our grateful appreciation of the able services of Mr. L. Farrer-Brown as Secretary of the Committee. We cannot commend too highly the manner in which he has carried out a very difficult and exacting task or the skill and energy that he has shown throughout this work.

We also wish to record our thanks to Miss G. McDonald and to the members of Mr. Farrer-Brown's staff, to Mr. O. Hasan and to Miss D. Livock, from all of whom we have received valuable assistance.

We have the honour to be, Sirs,

Your obedient servants,

(Signed) W. M. GOODENOUGH (*Chairman*).
 JOHN S. B. STOPFORD (*Vice-Chairman*).
 T. R. ELLIOTT.
 A. M. H. GRAY.
 JAMES HENDRY.
 A. V. HILL.
 WILSON JAMESON.
 J. R. LEARMONTH.
 ERNEST POOLEY.
 JANET VAUGHAN.

L. FARRER-BROWN (*Secretary*).

26th May, 1944.

APPENDIX A.

Medical Man Power.

*Memorandum by the Government Actuary.***Object.**

1. The object of this memorandum is to enable estimates to be made of the number of new entrants to the Medical Profession which will be required in the future and so, in turn, to assist the Inter-Departmental Committee on Medical Schools in arriving at decisions regarding the intake of students to the Medical Schools in Great Britain and related problems.

Growth of the Profession.

2. The Medical Register for 1943 contains a table showing the number of persons whose names were registered in, added to, or removed from, the Medical Registers for each year from 1923 to 1942 inclusive. The numbers on the Register at the end of each of these years rose steadily from 48,140 on 31st December, 1923, to 69,428 at the end of 1942, the annual rate of growth showing a substantial acceleration during the war years, particularly in the Foreign List. The total at the later date is analysed to show the numbers in each of the Local Registers and in the Colonial and Foreign Lists, as follows:—

Local Register, or List						Number on 31.12.1942	Per cent. of total
England	...	...	...	...	...	33,190	48
Scotland	...	...	...	...	...	19,527	28
Ireland	...	...	...	...	...	9,114	13
Colonial	...	...	...	...	...	5,435*	8
Foreign	...	...	...	...	...	2,162*	3
Total						69,428	100

* Including 294 and 1,750 temporarily registered respectively in the Colonial and Foreign Lists.

3. A summary extract from the table referred to above is given in Appended Table I, showing, for each of the years 1934 to 1942, the numbers of new admissions, deaths, other removals (net, after deducting the numbers restored) and the numbers on the Register at the end of each year. Provisional figures for 1943 are included.

4. The influence of the war becomes apparent in the figures for 1939, and, as an indication of the pre-war position, it may be noted that during the five years 1934-38 inclusive the number of new admissions averaged 2,006 a year, of whom 1,527 entered on the English and Scottish Local Registers, 218 on the Irish Local Register and 261 on the Colonial and Foreign Lists.

5. While a doctor who qualifies in England and Wales, Scotland or Ireland is normally placed on the Local Register of the country in which he qualifies, this is not essential, and in a few instances registration takes place in one of the other countries. It is, however, understood that such cases can be assumed to balance and that the new admissions to the separate Local Registers can reasonably be taken as the numbers qualifying in the respective countries. The significance of the point in the present connection lies in the Irish registrations and for the purpose of this memorandum it has been assumed that the new admissions to the English and Scottish Local Registers have qualified in the medical schools in Great Britain.

Location.

6. A doctor's name remains on the Local Register to which he was first admitted no matter where he may reside thereafter, and consequently the totals on the separate Registers such as those shown in paragraph 2 above do not necessarily indicate the numbers of doctors resident in the respective countries. On this point, the Medical Directory includes a statistical summary of the profession according to country of

residence together with the numbers in the Services, and the following figures have been extracted from the volume for 1943.

	Number	Per cent. of total
England and Wales	40,466	59
Scotland	7,331	11
Ireland	4,479	6½
Abroad	11,366	16½
Services (see para. 9)	3,098	4½
Temporarily registered	1,632	2½
Total	68,372	100

7. The differences between the totals in the Medical Directory and in the Medical Register (see paragraph 2) is presumably due in part to the non-return of replies to the annual circular to all members of the profession, from which the Directory is mainly compiled. The figures in the statistical summary in the Medical Directory are not further analysed to show the numbers in each of the Local Registers according to present residence.

Inadequacy of available published statistics.

8. Comparing the two published statistical summaries, it will be seen that, on the one hand, the Medical Register shows the numbers in each of the Local Registers and, on the other, the Medical Directory shows the numbers according to place of residence. But neither gives a combination of both classifications, which is needed for present purposes. There is, moreover, no information regarding ages, to which reference will be made later.

Analysis by residence and country of qualification.

9. A special analysis according to residence in 1943 as shown by the Medical Directory was made by the Secretary of the Committee of 7,783 surviving doctors who qualified in the five years 1933-37. A summary of the results is given below:—

Country of Residence in 1943

Qualification	England and Wales	Scotland	Total Great Britain	Ireland	Abroad	Services	Total
England and Wales	3,474	17	3,491	12	439	275	4,217
Scotland... ..	683	1,125	1,808	6	350	113	2,277
Total Great Britain	4,157	1,142	5,299	18	789	388	6,494
Ireland	311	5	316	572	61	91	1,040
Abroad	19	2	21	—	71	5	97
Scottish Triple after Continental Degree.	125	5	130	—	22	—	152
Grand Total	4,612	1,154	5,766	596	943	484	7,783

The number shown in the Medical Directory under the heading "Services" has remained fairly constant at about 3,100 during the last ten years. It includes those in the permanent naval, military, air force, and Indian medical services, but does not include doctors temporarily in the Services during the war.

From the above table it will be seen that (a) out of a total of 6,494 who qualified in British medical schools, 5,299, or 81½ per cent., were practising in Great Britain, and 1,195, or 18½ per cent., elsewhere. (b) out of a total of 5,766 doctors resident in Great Britain, 5,299, or 92 per cent., qualified in British schools, 316, or 5½ per cent., qualified in Ireland, and 151, or 2½ per cent., had foreign qualifications.

10. An alternative and briefer analysis was made by recording similar details regarding the doctors whose names appear at the top of each page of the Medical Register for 1943. The total number so recorded was 2,065, of whom 270 were registered before the year 1903. In this analysis, doctors with bankers' addresses were treated as being in the Services, if registered in 1903 or later. The percentage

results are shown in the following table, in which those given in the previous paragraph are repeated for purposes of comparison.

Sample	Total No. in Sample	Doctors qualified in British schools			Doctors resident in Great Britain		
		Total	Resident in Great Britain		Total	Qualified in British Schools	
			No.	Per cent. of total		No.	Per cent. of total
<i>Medical Register, 1943</i> (first name on each page)							
Registered before 1903	270	227	192	84.6	210	192	91.4
„ 1903 or later	1,795	1,358	1,106	81.4	1,221	1,106	90.6
Total	2,065	1,585	1,298	81.9	1,431	1,298	90.7
<i>Medical Directory 1943.</i> All doctors qualified in 1933-37.	7,783	6,494	5,299	81.6	5,766	5,299	91.9

11. While the total of 2,065 included in the alternative analysis is too small to warrant much confidence in the result, taken by itself, it will be seen that the percentages are not widely different from and serve to confirm those revealed by the more extensive investigation, which may be taken as showing the position after a reasonable period following qualification when the doctors have had time to settle down in their permanent careers. On consideration of these figures, it has been assumed later in this memorandum (*see* paragraph 23) (a) that 81½ per cent. of the doctors who qualify in British medical schools pursue their careers in Great Britain after qualification, and (b) that of the total number of doctors practising in Great Britain, 91½ per cent. qualified in British medical schools. The effect of these assumptions on the relation between the annual output of the medical schools and the annual addition to the number of doctors practising in Great Britain is that, under pre-war conditions, the latter should be increased by about one-eighth to arrive at the required number of students who should qualify in British medical schools each year.

Present age distribution of the Profession.

The National Register.

12. It is obvious that the present age distribution of the profession has a vital bearing on the numbers surviving from year to year in the future, and hence on the new entrants needed to replace the wastage, or to increase the total.

13. As mentioned in paragraph 8 above, no information on this point is given either in the Medical Register or in the Medical Directory. But the ages of civilian doctors in Great Britain and Northern Ireland have been recorded in a card index in the National Register and copies were made available of certain confidential tabular statements compiled by the Central Medical War Committee.

14. These tables, however, did not show more than was required for the particular purpose which gave rise to them. No analysis had been made of the pre-war age distribution and the subsequent tables, while giving certain totals in broad age groups, did not contain sufficient detail to enable them to form the basis of the present investigation.

15. After consultation, arrangements were made through the courtesy of Dr. Hill and his assistants for a special tabulation to be made of the card index of the Central Medical War Committee, and it is satisfactory to record appreciation of the fact that notwithstanding present-day difficulties, the considerable task of analysing and counting over 50,000 cards was undertaken and promptly completed by the staff at B.M.A. House. The results are given in Appended Table II, which shows the numbers on the National Register on 22nd February, 1944, who were born in the year 1864 or later, and therefore includes doctors aged up to 79 years. Those aged 80 and over were omitted. Particulars were also made available of the deaths which occurred in 1943.

16. The analysis in Appended Table II does not include doctors who were in the Services before the outbreak of war, but includes those who have since joined and who were serving temporarily with H.M. Forces. The majority of the young doctors who have qualified during the war have, it is understood, entered the Services after some months of hospital experience. A few of these would presumably have entered the Services in any event in peace conditions, but it is understood that the total of 51,539 shown in Appended Table II may be regarded as approximately the number of civilian doctors under the age of 80 who would normally be resident in Great Britain and Northern Ireland.

Proportions "active" and retired—men and women.

17. The table gives separate figures for men and for women, together with the totals, in five-yearly age groups, showing in each case the numbers retired or otherwise not available for medical work, and the proportions engaged in active practice. The figures do not show the number of doctors who had retired but who have returned to practice for the time being to fill gaps created by the war. Others no doubt have continued in practice who normally would have retired. The proportions in practice at the present time must be abnormally high, and while no information on the pre-war position in this respect is available there is evidence in the statements compiled from time to time by the Central Medical War Committee that the number of doctors who during the war have returned to active practice after having retired, or who have delayed their retirement, is not inconsiderable and has increased.

18. Another feature of the retirement position to which special attention may be directed is the high proportion of women who have retired compared with that of men, particularly at the younger ages. This will be seen by comparing the "proportions active" shown in Appended Table II. Examining the point on a broader basis, the total number of women under age 50 included in the table is 5,814, of whom 669, or 11½ per cent., have retired. The corresponding total for men is 29,156, of whom only 123, less than one-half of one per cent., have retired. Thus, of the total of 34,970 doctors under the age of 50, the number of women is 5,814, or 16½ per cent., but the total of 792 retired doctors under age 50 includes 669, or 84½ per cent., who are women.

19. There is no reason to suppose that the war-time tendency to resume practice after having retired can, at these ages, have affected men to a greater extent than women. Taking men and women together, the figures in the preceding paragraph show that about 2½ per cent. of all under age 50 have retired. It is evident that if the proportion of women entrants to the profession were to increase substantially, the average working life of doctors as a whole would be reduced. It follows in that event that if it were desired to maintain the numbers who are in active practice at a given level, the number of new entrants each year would have to be increased to allow for the higher retirement rates which would be experienced.

Numbers in Great Britain at present.

20. As the estimates which are required relate to Great Britain only, the numbers shown in Appended Table II have to be adjusted to exclude those in Northern Ireland and those who engage in practice as dentists. On the other hand, allowance has to be made for the inclusion of doctors aged 80 and over. The total number of doctors on the National Register in Great Britain at the beginning of February, 1944 (excluding dentists), was 50,566, of whom 45,413 were in active practice and 5,153 retired. Doctors aged 80 and over (who may be presumed all to have retired) included in these figures probably numbered between 1,000 and 1,100, and allowing for this and for other differences, including changes in the General Register during the greater part of February, the figures appear consistent with those in Appended Table II. It has been assumed in estimates that the numbers mentioned above represent the totals in Great Britain at the end of 1943.

Prospective new entrants in the next few years.

21. In view of the fact that the period spent by a student between entry into one of the medical schools and his qualification as a medical practitioner is at least five years, it will be appreciated that any change in the recent level of students who start their studies each year cannot affect the number of newly-qualified medical practitioners for at least that period. Such new entrants to the profession are already more or less determined by the numbers of students at present in the medical schools and engaged in the various stages of the curriculum. Particulars are given in Appended Table III of the numbers of full-time medical students in the universities and schools of universities in Great Britain in the academic years 1938-42, from which it will be seen that the totals have been over 11,000 each year, but fell slightly below in 1942-43. The Scottish extra-mural schools, to which the number of annual entrants was at one time about 200, but has been decreasing, are not included. The

annual quota for new students has been about 2,300 in recent years, but the actual number of new admissions in 1942-43 was 2,050. Allowing for a proportion of the students failing to complete the course, it appears from the figures that the number of newly qualified doctors emerging from the British schools during the next few years is likely to be in the region of 1,850 a year. In the absence of statistics regarding ages at qualification, it has been assumed provisionally* that students qualify at an average age of 25.

Basis of the estimates.

22. The estimates which follow have been based on the various facts outlined above, combined with appropriate assumptions regarding rates of mortality. The starting point has been taken as the numbers in Great Britain shown in paragraph 20, assumed to be distributed in the various age groups in proportion to the numbers in Appended Table II. In respect of the retirement element, however, three series of estimates have been made, referred to later as A, B and C. The first (A) is based on the assumption that the proportions in active practice in the various age groups shown in Appended Table II will continue in future. As indicated above, however, this assumption is likely to result in over-estimating the numbers remaining in practice and therefore in an under-statement of the new entrants actually required each year. Further, it seems desirable to allow for the possibility that there may be a greater tendency in future, either through an increase in the numbers engaged in superannuable posts or otherwise, for doctors to retire, or to retire at an earlier age, than has hitherto been the case. The adjustments required in respect of these two factors—and in particular the second—are necessarily entirely conjectural. In the alternative series of estimates (B) and (C), small reductions have been made in the proportions in active practice shown in Appended Table II, up to the age of 50. The revised rates at these ages probably make reasonable allowance for ill-health retirements and for the retirement on marriage of women doctors, provided that there is no material change in the relative proportions of men and women. Between ages 50 and 60, the reductions assumed are more substantial.

Up to age 60, Bases B and C are the same. Over age 60, the proportions assumed in C represent a drastic change in the tendency to retire which might perhaps be assumed to come into operation gradually after a long period has elapsed but is no doubt unlikely to be realised in the near future.

Basis B is intermediate, and represents a less stringent view of the retirement position than Basis C. It has been assumed that the number of doctors remaining in active practice over age 75 (Basis B) or 70 (Basis C) will be so small as not to have any significant effect on the estimates. The proportions assumed over age 50 are as follows:—

Age Group	Proportion of the total number of doctors in the age group who are engaged in active practice		
	Feb. 1944 (Appended Table II)	Hypothetical Future Rates	
	A per cent.	B per cent.	C per cent.
50-54	95.9	92	92
55-59	93.6	90	90
60-64	86.5	75	60
65-69	73.9	40	25
70-74	57.1	10	nil
75-79	38.0	nil	nil

Apart from these alternatives, no change has been made in the respective bases of the three series of estimates, which otherwise are the same.

Estimates of the future totals in Great Britain.

23. The table which follows shows the estimated survivors at the end of five-yearly periods of the existing total of 50,566 doctors in Great Britain, adjusted to exclude those aged 80 and over. The table also shows the estimated additions to these survivors arising from an annual recruitment of 1,650 new doctors, together with the estimated numbers continuing in active practice on the alternative assumptions regarding retirement which are referred to above, and the resulting grand totals under age 80. The annual new entrant total of 1,650 is related, as described in paragraph 11

* See addendum, p. 256.

above, to the total of 1,850 newly qualified doctors who may be expected to emerge from the British medical schools in the next few years.

Medical practitioners in Great Britain under age 80.

Date 31st Dec.	Estimated Total surviving from			Estimated numbers in active practice (see para. 22)		
	Number on 31.12.43	New entrants of 1,650 a year	Total	Basis A	Basis B	Basis C
1943 ...	49,525*	—	49,525	45,413	45,413	45,413
1948 ...	44,770	8,200	52,970	48,920	45,560	45,413†
1953 ...	40,140	16,250	56,390	52,360	49,050	48,070
1958 ...	35,630	24,140	59,770	55,520	52,110	50,970
1963 ...	31,150	31,820	62,970	58,250	54,380	52,890

* Excluding an estimated number aged 80 and over.

† Total assumed to remain unchanged till 1948.

In comparing the respective results under Bases A, B and C it must be borne in mind that Basis A represents the position in the fifth year of war when every effort has been made to increase the number of civilian practising doctors and therefore almost certainly overstates the probable numbers continuing in active practice. In the circumstances no further estimates have been made on this basis. On the other hand, Bases B and C are entirely speculative, and whether or not they may in the long run represent the position, the assumption that freedom of movement will have been restored and that drastic changes in the retirement situation will have become effective in the near future is unlikely to be realised, particularly in the case of Basis C. Such changes will no doubt take place gradually over an extended period, tending in the initial stages towards Basis B and thereafter progressing at intervals to Basis C.

Alternative assumptions on future intake and total numbers in practice in Great Britain.

24. The following table shows on the hypothetical Bases B and C the annual number of newly qualified entrants needed in five-yearly periods in future which would be required to build up the numbers practising in Great Britain to certain totals within the periods indicated, and thereafter to maintain these totals. In cases where larger annual increases in 1944-48 would be needed it has been assumed that the numbers entering in these five years will not exceed the probable actual total of 1,650 a year.

New entrants required per annum

Years of Entry	Period within which minimum number in practice in Great Britain is to be reached			
	10 years		15 years	
	Basis B	Basis C	Basis B	Basis C
I. Minimum number in practice—45,400 (present total)				
1944-48 ...	1,650	1,650	(same as for 10 years)	
1949-53 ...	912	1,111		
1954-58 ...	1,007	1,045		
1959-63 ...	1,149	1,228		
II. Minimum number—50,000				
1944-48 ...	1,650	1,650	1,650	1,650
1949-53 ...	1,844	2,043	1,433	1,550
1954-58 ...	1,033	1,071	1,433	1,550
1959-63 ...	1,178	1,255	1,178	1,255
III. Minimum number—55,000				
1944-48 ...	1,650	1,650	1,650	1,650
1949-53 ...	2,859	3,058	1,844*	2,043*
1954-58 ...	1,062	1,103	2,049	2,086
1959-63 ...	1,210	1,283	1,210	1,283

* Producing 50,000 after 10 years.

The remarks made above on the retirement element, are, of course, applicable to the figures shown under Bases B and C of this Table.

Doctors qualifying in British Medical Schools, and annual intake of students.

25. It was noted in paragraph 11 that after allowing on the one hand for doctors who qualify in Great Britain but who proceed elsewhere to practise, and on the other for those practising in Great Britain who have qualified in Ireland or abroad, the net effect is that the annual output of the British Medical Schools has been about one-eighth greater than the numbers taking up practice in Great Britain. If the relative movements which gave rise to this result continue in future, the required annual output of the medical schools can be obtained by adding one-eighth of the various numbers of newly qualified entrants shown in the table in paragraph 24. This is the basis of the figure of 1,650 assumed in the table which corresponds to 1,850 qualifying annually in Great Britain.

26. The next step is to ascertain what the annual intake of new students should be in order that the medical schools may produce each year the required number of qualified practitioners. This depends on the proportion of students who do not complete the course either through inability to pass the examinations or otherwise. Full information on this point is lacking, but the general opinion is understood to be that about 10 to 15 per cent. of the entrants fail to qualify. Statistics of one of the large medical schools indicated results between these limits, and it may perhaps be assumed for illustrative purposes that 12½ per cent. of the student entrants do not qualify.

27. On the assumptions made in the foregoing paragraphs the relationship between the number of students starting study in the medical schools and the number of newly qualified doctors taking up practice in Great Britain may be arrived at as follows:— Out of 2,000 new students, 87½ per cent., or 1,750, eventually qualify. Of these 81½ per cent., or 1,425, remain in Great Britain and 325 proceed abroad or enter the Services. The former total, 1,425, represents 91½ per cent. of the total number of new doctors starting practice in Great Britain, the total of whom is therefore 1,560, the balance of 135 coming from Ireland or abroad. The effect of this somewhat perplexing succession of percentages is possibly more clearly illustrated in the following table, which shows for certain of the totals appearing in the table at the end of paragraph 24, the corresponding number of new students needed annually in British Medical Schools. For reasons stated later, these examples must be treated with considerable reserve.

Numbers annually starting practice in Great Britain			Numbers annually qualified in British Medical Schools			Corresponding number of new students needed annually in British Medical Schools to produce col. 4
Total	Qualified		Total	Proceeding to practice		
	in British Schools 91½%	in Ireland or abroad 8½%		in Great Britain 81½%	Abroad or in Services 18½%	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1,560	1,425	135	1,750	1,425	325	2,000
1,650	1,510	140	1,850	1,510	340	2,120
1,790	1,640	150	2,010	1,640	370	2,300
1,845	1,690	155	2,070	1,690	380	2,365
1,950	1,785	165	2,190	1,785	405	2,500
2,050	1,875	175	2,300	1,875	425	2,630

Immigration and Emigration.

28. The link between columns (1) and (4) in the immediately preceding table depends on two important elements:—

(a) the number of qualified doctors who come from Ireland or abroad to practise in Great Britain, and

(b) the number of doctors who, having qualified in British medical schools, take up practice abroad, or enter the Services.

In all the illustrative examples given in the above table, both of these elements are based on pre-war percentages of the related totals. If, however, these totals were to change substantially from past levels, the same percentages might not apply.

First, as regards (a) if the number of doctors practising in Great Britain were to be increased substantially, it does not necessarily follow that the number of doctors with Irish or foreign qualifications would increase proportionately to the total, as assumed in column (3) of the table. There may be conflicting and pressing post-war demands on the Continent which might even reduce the supply. But if, for example, the number remained more or less constant, at (say) about 140, the number in the example given in the last line of the table would be reduced by 35, necessitating a compensating increase in the total of 1,875 qualifying in British schools appearing in column (2). This in turn would have repercussions on columns (4) to (7).

29. Similar considerations arise in connection with the second element (b) which, in view of the numbers involved, appears to be the more important. If the demand for British qualified doctors to proceed abroad or to enter the Services, as assumed in column (6) of the table, were to remain at a more or less constant figure, and did not vary proportionately with the total number qualifying, the numbers appearing on the same line in other columns of the table would be affected. The answers to these points depend on any post-war changes which may take place in the position regarding the numbers of doctors (a) who may be expected to come to this country after qualifying in the Irish schools and (b) who may be required for the Services, in the Colonies or elsewhere abroad.

Conclusion.

30. It may be convenient to conclude with a brief summary of some of the more important points referred to in this memorandum:—

(i) The proportion of retired doctors at the present time is abnormally low.

(ii) The pre-war position as regards retirement is not known as a guide to the future, but it is obvious that the proportion among women must be higher than among men, and if the proportion of women entrants to the profession increases, the average working life of doctors will fall.

(iii) There may eventually be a greater tendency to retire, or to do so at an earlier age, than has hitherto prevailed.

(iv) The number of newly qualified entrants to the profession in the next few years from British medical schools is already more or less determined at an average of about 1,850 a year, by the number of students at present in these schools.

(v) Tables are given which show the numbers of newly qualified practitioners, who would be required annually to maintain at certain assumed levels the total number of doctors practising in Great Britain, and, subject to the foregoing points, further estimates are given of the related annual output which would be needed from the British medical schools. For example, if it were desired to achieve increases in the existing number of 45,400 practising doctors so as to reach 50,000 in ten years' time and 55,000 in a further five years, it will be seen from the table in paragraph 24 that, assuming the less stringent retirement conditions of Basis B during that period, the number of new doctors starting practice in Great Britain would have to be about 1,850 a year during the five years 1949-53, and about 2,050 a year during the subsequent five years. The related annual numbers of qualified practitioner emerging from the British medical schools would be about 2,070 and 2,300 respectively as shown in paragraph 27. The corresponding annual numbers of new students who should start their training in these schools (say) six years earlier would have to be about 2,370 and 2,630. If, during the later years of the period conditions regarding retirement tended towards Basis C, provision would have to be made for additional entrants in order to replace the greater wastage which would arise. In order, therefore, to attain, on either basis, the results mentioned above, some increase would be needed in the present quota of 2,300 annual entrants to the British medical schools.

(Signed) G. S. W. EPPS.

Government Actuary's Department,
London, S.W.

12th April, 1944.

Addendum (see para. 21).

Investigation since made of the ages of doctors whose names were placed on the Medical Register in 1938 shows an average slightly under 26 years, compared with 25 assumed in the memorandum, but the results of calculations on this basis show no significant difference from those given therein.

15th May, 1944.

G. S. W. EPPS.

APPENDED TABLE I

Year	England and Scotland	New Admissions			Numbers removed			Number on the Register on 31st December
		Ireland	Colonial and Foreign	Total	By death	Other causes (net)	Total (net)	
1934 ...	1,318	154	192	1,664	898 [*]	11	909	57,496
1935 ...	1,478	177	227	1,882	907	110	1,017	58,361
1936 ...	1,410	223	272	1,905	1,082	174	1,256	59,010
1937 ...	1,689	239	286	2,214	957	104	1,061	60,163
1938 ...	1,740	295	330	2,365	1,003	105	1,108	61,420
1939 ...	2,129	356	483	2,968	948	30	978	63,360
1940 ...	1,996	315	73	2,384	1,071	(- 6)*	1,065	64,679
1941 ...	1,821	285	1,187	3,293	985	(- 5)*	980	66,992
1942 ...	2,256	381	919	3,556	1,034	86	1,120	69,428
1943† ...	2,282	431	1,018	3,731	1,073	12	1,085	72,074

* Excess of number restored over removals (other than deaths):

† Provisional figures for 1943.

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APPENDED TABLE II
National Register of Medical Profession in Great Britain and Northern Ireland
Numbers on the Register on 22nd February, 1944

[Doctors in the Services at the outbreak of war are not included]

Age Group	Men			Women			Total	
	Total	Retired	Proportion Active	Total	Retired	Proportion Active	Total	Proportion Active
Under 25	1,865	2	.999	399	6	.985	2,264	.996
25-29	7,070	16	.998	1,275	95	.925	8,345	.987
30-34	5,832	22	.996	852	99	.884	6,684	.982
35-39	4,912	17	.997	673	78	.884	5,585	.983
40-44	5,383	30	.995	1,473	212	.856	7,056	.966
45-49	3,894	36	.991	1,142	179	.843	5,036	.957
50-54	3,122	61	.980	468	87	.814	3,590	.959
55-59	2,917	146	.950	293	58	.802	3,210	.936
60-64	2,751	317	.885	240	86	.642	2,991	.865
65-69	2,636	636	.759	198	103	.480	2,834	.739
70-74	2,239	930	.585	114	80	.298	2,353	.571
75-79	1,520	936	.384	71	51	.282	1,591	.380
Total	44,341	3,149	.929	7,198	1,134	.842	51,539	.917

APPENDED TABLE III

Full-time medical students in the universities and schools of universities
in Great Britain

Academic Year	Year of Medical Course					Total
	1st	2nd	3rd	4th	5th	
1938-39	1,696	2,038	1,930	1,775	4,114	11,553*
1939-40	1,815	2,075	1,815	1,840	3,897	11,442
1940-41	1,695	2,076	1,767	1,900	3,853	11,291
1941-42	1,735	1,969	1,835	1,681	3,959	11,179
1942-43	1,617	1,904	1,806	1,770	3,801	10,898

Note.—It should be noted that this table does not show the analysis according to the time elapsed since the students started their studies. Thus the figures for second year include direct entrants to the course, and those for the fifth year comprise all senior students. Figures for all years include students who are taking again a particular year's course.

* Plus one medical student whose year of study is not known.

APPENDIX B

Number of full-time undergraduate medical students attending medical schools in Great Britain in 1938-1939 and later years

I. *University Medical Schools(a)*

[The following tables are based on the annual returns submitted by the universities of Great Britain to the University Grants Committee]

MEDICAL SCHOOLS	1938-1939			1939-40	1940-41	1941-42	1942-1943		
	Men	Women	Total M & W	Total M & W	Total M & W	Total M & W	Men	Women	Total M & W
UNIVERSITIES IN THE ENGLISH PROVINCES & WALES									
Birmingham ...	262	83	345	389	401	376	273	109	382
Bristol ...	149	88	237	259	257	249	141	97	238
Cambridge ...	456	25	481	465	442	449	366	45	411
Durham—King's Coll. ...	326	73	399	389	411	446	347	118	465
Leeds ...	410	93	503	512	500	530	329	156	485
Liverpool ...	400	105	505	515	500	467	337	128	465
Manchester ...	326	92	418	443	473	515	399	134	533
Oxford ...	209	17	226	295	325	363	275	75	350
Sheffield ...	134	40	174	173	175	176	107	53	160
Cardiff—Univ. College ...	90	50	140	167	168	143	89	48	137
Welsh Nat. Sch. of Med. ...	117	42	159	175	178	177	111	48	159
Total ...	2,879	708	3,587	3,782	3,830	3,891	2,774	1,011	3,785
UNIVERSITY OF LONDON									
Charing Cross Hosp. Med. Sch. ...	122	—	122	125	123	128	133	—	133
Guy's Hosp. Med. Sch. ...	593	—	593	627	603	593	598	—	598
King's Coll. ...	291	24	315	248	247	225	220	40	260
King's Coll. Hosp. Med. Sch. ...	153	50	203	191	224	196	125	47	172
London Hosp. Med. Coll. ...	427	—	427	466	428	407	382	—	382
London Sch. of Med. for Women ...	—	357	357	384	375	403	—	413	413
Middx. Hosp. Med. Sch. ...	437	—	437	454	413	393	364	—	364
Queen Mary Coll. ...	42	4	46	18	25	30	28	—	28
St. Bart's Hosp. Med. Coll. ...	828	—	828	804	745	730	697	—	697
St. George's Hosp. Med. Sch. ...	119	—	119	126	100	112	103	—	103
St. Mary's Hosp. Med. Sch. ...	436	—	436	416	397	394	395	—	395
St. Thomas's Hosp. Med. Sch. ...	475	—	475	394	355	270	272	—	272
Univ. Coll. ...	178	59	237	174	160	153	96	54	150
Univ. Coll. Hosp. Med. Sch. ...	275	57	332	328	311	302	254	50	304
Westminster Hosp. Med. Sch. ...	137	—	137	134	141	145	147	—	147
Total ...	4,513	551	5,064	4,799	4,647	4,481	3,814	604	4,418
Total England & Wales...	7,392	1,259	8,651	8,581	8,477	8,372	6,588	1,615	8,203

MEDICAL SCHOOLS	1938-1939			1939-40	1940-41	1941-42	1942-1943		
	Men	Women	Total M & W	Total M & W	Total M & W	Total M & W	Men	Women	Total M & W
UNIVERSITIES OF SCOTLAND									
Aberdeen ...	339	99	438	434	451	450	283	129	412
Edinburgh ...	905	202	1,107	1,079	1,022	1,001	701	241	942
Glasgow ...	897	189	1,086	1,064	1,065	1,060	795	227	1,022
St. Andrew's ...	195	77	272	284	276	296	201	118	319
Total ...	2,336	567	2,903	2,861	2,814	2,807	1,980	715	2,695
Total Great Britain ...	9,728	1,826	11,554	11,442	11,291	11,179	8,568	2,330	10,898

II. Non-University Medical Schools

MEDICAL SCHOOLS	1938-1939			1939-40	1940-41	1941-42	1942-1943		
	Men	Women	Total M & W	Total M & W	Total M & W	Total M & W	Men	Women	Total M & W
NON-UNIVERSITY MEDICAL SCHOOLS									
West London Hosp. Med. Sch. ...	—	38	38	34	37	32	—	38	38
Anderson Coll. of Medicine ...	317	10	327	252	(b)	(b)	(b)	(b)	(b)
St. Mungo's Coll., Glasgow ...	459	29	488	339	(b)	(b)	(b)	(b)	(b)
School of Med. of the Royal Colls., Edinburgh ...	533	27	560	359	(b)	(b)	(b)	(b)	(b)
Total ...	1,309	104	1,413	984	37	32	—	38	38

Footnotes—

- (a) These figures include both students reading for university medical degrees and those studying for registrable qualifications of other licensing bodies. They do not include a small number of students who attended courses in biology, chemistry, and physics as pre-medical subjects at three University Colleges (Exeter, Nottingham, and Swansea).
- (b) Figures not available.

APPENDIX C

An analysis relating to registered medical practitioners who qualified in 1933-1937 inclusive and who were admitted to the Medical Register during this period or subsequently.

1. In the course of our enquiry we desired to obtain some guidance on the following questions, namely (i) the proportion of students who were admitted to the Medical Register by virtue of each of the licensing qualifications, (ii) the proportion who obtained a university ordinary medical degree either as a first registrable qualification or after obtaining a registrable diploma, (iii) the proportion of students who subsequently obtained higher degree, diplomas or additional qualifications.

2. We therefore made an investigation with regard to practitioners who qualified during the 5 years 1933-1937. These years were selected as being sufficiently near to the present day to exhibit modern tendencies and yet free from abnormal influences due to the war. In addition to providing information on the three questions noted above, the investigation furnished some guidance concerning the proportion of medical practitioners who, before the war, held one or more house-appointments after qualification. The particulars so obtained have been referred to in Chapter 15, paragraph 3 of our report.

3. During the 5 years 1933-1937 the General Medical Council registered 9,207 practitioners. Excluding the 190 who have died and 8 whose names have been removed from the register on other grounds, these practitioners, together with 33 who qualified for registration during 1933-1937 but who did not apply for registration until after the 1st January, 1938, were in the following categories:—

6,494 persons who had qualified after taking the whole of their medical training at schools in Great Britain;

97 persons who had obtained a registrable qualification from a British licensing body but had received their medical training abroad;

152 persons who, possessing a continental medical degree, had obtained the Scottish Triple Qualification after a one year's course of training at an approved institution in Great Britain;

117 persons who had qualified before 1st January, 1933, but had registered during 1933-1937;

1,142 persons who had been admitted to the colonial and foreign lists;

972 persons who had registered in Northern Ireland and Eire; and

68 persons who had trained at Irish schools but had registered at either the English or Scottish branch of the General Medical Council (*i.e.* 64 at the English Branch Council and 4 at the Scottish Branch Council).

4. Particulars needed to answer the three questions stated in paragraph 1 have been obtained for the 6,494 practitioners who took the whole of their medical course of training at schools in Great Britain. The results are shown in Tables A to D included in this appendix.

5. Practitioners have been grouped according to the medical school at which they took the clinical part of their training. For example, the students who took their pre-clinical studies at the Universities of Oxford and Cambridge but went to the medical schools of other universities for the clinical part of their training have been included in the figures for the latter schools. Tables A and B summarize the information for all the schools in Great Britain. Tables C and D give the corresponding information* for the individual medical schools in London.

6. The investigation has been based in the first instance on information derived from the Medical Directory for the year 1943. The information published in this Directory is supplied by the practitioner himself, and for this reason the amount of detail concerning additional qualifications and house-appointments tends to vary. To supplement and verify these particulars, extensive use has been made of the files and registers of the General Medical Council. The Society of Apothecaries and the Royal College of Surgeons of Edinburgh have also supplied additional information. We wish to acknowledge our gratitude to these bodies without whose help it would not have been possible to achieve a reasonable degree of accuracy.

7. In making the analysis it has been necessary to assume that a practitioner who obtained a registrable diploma and a university first degree in the same year, obtained the diploma before the degree as is the usual practice.

8. It will be seen from paragraph 3 that 152 persons possessing a continental medical degree obtained the Scottish Triple Qualification after one year's course of training at an approved institution in Great Britain. This figure was obtained from the register of students maintained by the General Medical Council, but it is probable that a small number of persons so qualified have been included in the analysis as it was not possible in every case to trace the exact date of commencement of training.

9. The figures for the Scottish extra-mural schools have to be viewed in the light of the fact that up to November, 1943, 162 persons who obtained the Scottish Triple Qualification in the 5 years 1933-37 had not applied for admission to the British Register. The columns in each of the Tables are numbered. The figures in brackets at the head of the columns in Tables B and D denote the method of calculating the percentages in these columns.

TABLE A
Registered medical practitioners who qualified in 1933-1937 inclusive after taking the whole of their Medical Training in Great Britain.

Trained at	Registered on										Total	
	University Degree		Diploma of									
			English Conjoint Board		L.S.A.		Scottish Triple Board		Total			
M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
London Schools No. %	(1) 133	(2) 59	(3) 2,159	(4) 255	(5) 160	(6) 9	(7) 47	(8) 1	(9) 2,365	(10) 265	(11) 2,499	(12) 324
Universities—English Provinces & Wales No. %	5.3	18.2	86.4	78.7	6.4	2.8	1.9	.3	94.7	81.8	—	—
Scottish Universities No. %	730	148	365	44	63	3	37	4	465	51	1,195	199
Scottish Extra-Mural Schools* No. %	61.1	74.4	30.5	22.1	5.3	1.5	3.1	2.0	38.9	25.6	—	—
	1,697	239	3	2	—	—	51	—	54	2	1,751	241
	96.9	99.2	.2	.8	—	—	2.9	—	3.1	.8	—	—
	—	—	—	—	.7	6.6	268	14	270	158	270	15
	—	—	—	—	—	—	99.3	93.4	100.	100.	—	—
o Total No. %	2,560	446	2,527	301	225	13	403	19	3,155	333	5,715	779
	44.8	57.3	44.2	38.6	3.9	1.7	7.1	2.4	55.2	42.7	—	—

*The figures for the Scottish extra-mural schools are exclusive of (i) 152 practitioners who, possessing a continental medical qualification, obtained the Diploma of the Scottish Triple Board after 1 year's course of training at an approved institution; (ii) 162 persons who obtained the Scottish Triple Qualification but who had not applied for admission to the British Register up to November, 1943.

TABLE B.

The proportions of the practitioners included in Table A who (i) obtained a university ordinary medical degree either as their sole registrable qualification or in addition to a registrable diploma, and (ii) attained higher degrees or diplomas or other postgraduate qualifications.

Trained at	Registered on a diploma, subsequently obtained University first medical degree		Percentage of the total who obtained University first medical degree after obtaining registrable diploma		Total who obtained first medical degree either as registrable or after obtaining a registrable diploma		Obtained University first medical degree either as first registrable qualification or after obtaining registrable diploma, subsequently obtained higher degree or diploma		Registered on a diploma and did not obtain University first medical degree, subsequently obtained further diploma		Total who obtained additional qualifications		Previously obtained foreign or colonial medical degree or diploma		Total	Percentage trained at each group of schools	
	M.		W.		M.		M.		M.		M.		M.				
	B1	B2	B3	B4	A1+B1	A2+B2	B7	B8	B9	B10	B11	B12	B13	B14			
	A9	A10	B15	B16	B15	B16	B5	B6	B15-B5	B16-B6	B15	B16	B15	B16			
London Schools ...	(1) 996	(2) 125	(3) —	(4) —	(5) 1,129	(6) 184	(7) 555	(8) 86	(9) 244	(10) 21	(11) 779	(12) 107	(13) 51	(14) 1	(15) 2,499	(16) 344	(17) —
Universities—English	421	47.2	39.9	38.6	45.2	56.8	49.2	46.7	16.4	15.0	31.2	33.0	2.2	.3	1,195	199	43.5
Universities—Wales	163	22	—	—	9.3	170	314	54	23	8	337	62	14	1	1,195	199	27.4
Provinces and Wales	39.4	43.1	15.3	11.1	76.4	85.4	34.4	31.8	8.2	27.6	28.2	31.2	1.2	.5	1,751	441	—
Scottish Universities	5	—	—	—	1,702	239	302	73	2	—	28.8	73	—	—	270	15	30.7
Scottish Extra-Mural	9.3	—	.2	—	97.2	99.2	29.5	30.5	4.2	—	16.6	30.3	1.2	—	270	15	4.4
Schools	—	—	—	—	—	—	—	—	5.9	—	5.9	—	4.8	—	—	—	—
Total	1,184	147	20.7	18.9	3,744	593	1,371	213	265	29	1,636	242	78	2	5,715	779	100.0
	37.5	44.1	—	—	65.5	76.1	36.6	35.9	13.4	15.6	28.6	31.1	1.4	.3	—	—	—

TABLE C
Registered medical practitioners who qualified in 1933-1937 inclusive after taking the clinical part of their training at the medical schools in London.

Trained at	Registered on Degree of the University of						Registered on Diploma of						Total		Total	
	London		Oxford		Cambridge		Total		English Conjoint Board		L.S.A.		Scottish Triple Board		Total	
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.
Charing Cross Hospital Med. Sch.	29	46	52	4	52	4	133	59	2159	255	160	0	47	1	2366	265
Guy's Hospital Medical School	11	14	21	1	21	1	53	18	367	78	6	2	19	3	947	81
King's College Hosp. Med. Sch.	3	3	2	2	2	2	11	11	128	32	12	6	19	7	355	368
London Hospital Medical College	14	44	28	3	13	3	56	24	80	72	42	4	7	34	143	45
London School of Medicine for Women	7	43	29	—	14	—	51	—	87	—	5	—	2	—	265	—
Middlesex Hospital Med. Sch.	—	18	—	—	—	—	—	43	—	179	—	5	—	185	—	228
St. Bartholomew's Hosp. Med. Sch.	10	—	18	3	6	—	11	—	179	—	9	—	5	—	193	—
St. George's Hosp. Med. Sch.	4	—	17	8	12	—	54	—	433	—	4	—	2	—	946	—
St. Mary's Hosp. Med. Sch.	9	—	19	—	—	—	52	—	93	—	1	—	—	—	448	—
St. Thomas's Hosp. Med. Sch.	13	—	36	7	4	—	19	—	77	—	10	—	10	—	103	—
University Coll. Hosp. Med. Sch.	8	—	22	—	7	—	17	—	35	—	—	—	—	—	283	2
Westminster Hosp. Med. Sch.	3	2	10	2	4	—	19	5	89	41	3	—	2	—	95	—
	22	—	11	—	—	—	33	—	78	—	11	—	6	—	89	1
Total	29	46	52	4	52	4	133	59	2159	255	160	0	47	1	2366	265
	11	14	21	1	21	1	53	18	367	78	6	2	19	3	947	81

TABLE D
The proportions of the practitioners included in Table C who (i) obtained a university ordinary medical degree either as their sole registrable qualification or in addition to a registrable diploma and (ii) attained higher degrees or diplomas or other postgraduate qualifications.

Trained at	Registered on a diploma, subsequently obtained University first medical degree		Percentage of total who obtained University first medical degree after obtaining registrable diploma		Total who obtained University first medical degree either as first registrable qualification or after obtaining a registrable diploma		Obtained University first medical degree either as first registrable qualification or after obtaining a registrable diploma, subsequently obtained higher degree or diploma		Registered on a diploma and did not obtain first medical degree, subsequently obtained further diploma		Total who obtained additional qualifications		Previously obtained foreign or colonial medical degrees or diplomas		Total		Percentage trained at each of the London medical schools
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
	D1 C15	D2 C16	D3 D15	D4 D14	C7+D1 D15	C8+D2 D16	C7+D1 D15	C8+D2 D16	D9 D15-D5	D10 D16-D6	D11 D15	D12 D16	D13 D15	D14 D16	(15)	(16)	
Charing Cross Hosp. Med. Sch.	16 25.8	—	—	—	24 34.3	—	14 58.3	—	3 6.5	—	17 24.3	—	—	—	70	2	2.6
Guy's Hospital	108 30.4	—	22.9	—	121 32.9	—	59 48.8	—	36 14.5	—	95 25.8	—	7	—	368	—	13.0
King's College Hosp.	66 48.9	11 32.4	29.3	—	74 51.8	22 48.9	33 44.6	9 40.9	9 13.0	4 17.4	42 29.4	13 28.9	3 2.1	—	143	45	6.7
London Hospital	107 40.4	—	46.9	24.4	121 43.4	—	56 46.3	—	31 19.6	—	87 31.2	—	8	—	279	—	9.9
Medical College	—	—	38.4	—	—	—	—	61 46.9	—	14 14.3	—	75 32.9	—	—	—	228	8.1
London School of Medicine for Women	—	47.0	—	38.2	—	130 57.0	—	—	—	—	—	—	—	—	—	—	—
Middlesex Hospital	75 38.9	—	—	—	86 42.2	—	44 51.2	—	24 20.3	—	68 33.3	—	9	—	204	—	7.2
St. Bartholomew's Hospital	190 43.2	—	36.8	—	214 46.1	—	103 48.1	—	50 20.0	—	153 33.0	—	3	—	464	—	16.4
St. George's Hospital	46 45.5	—	40.9	—	48 46.6	—	29 60.4	—	7 12.7	—	36 35.0	—	10	—	103	—	3.6
Med. Sch.	53 29.0	—	44.7	—	67 34.0	—	24 35.8	—	18 13.8	—	42 21.3	—	4	—	197	2	7.0
St. Mary's Hospital	—	—	26.9	—	237 63.7	—	116 48.9	—	19 14.1	—	135 36.3	—	2.0	—	372	—	13.2
St. Thomas's	220 62.0	—	59.1	—	237 63.7	—	116 48.9	—	19 14.1	—	135 36.3	—	—	—	207	46	9.0
Hospital Med. Sch.	86 45.7	27 65.9	—	—	105 50.7	32 69.6	66 57.1	16 50.0	18 17.6	3 21.4	78 37.7	19 41.3	—	—	92	1	3.3
University College	—	—	41.5	58.7	—	—	17 53.1	—	9 15.0	—	26 28.3	—	7	—	—	—	—
Hospital Med. Sch.	29 32.6	—	31.5	—	34.8	—	53.1	—	—	—	—	—	—	—	—	—	—
Westminster	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hospital Med. Sch.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	996 42.1	125 47.2	— 39.9	— 38.6	1,129 45.2	184 56.8	555 49.2	86 46.7	224 16.4	21 15.0	779 31.2	107 33.0	51 2.1	1 .3	2,499	324	100.0

APPENDIX D.

Notes on the scheme of government of university medical schools other than the general medical schools of the University of London.

1. In constitution and government the university medical schools fall into the following five groups. In the first group each of the schools is the faculty of medicine of its respective university, administered in the same way as other faculties of the university. These schools are those in the English provinces (except King's College, University of Durham) and the four Scottish universities. The second group consists of University College and King's College, the two incorporated colleges of the University of London. In the third group are King's College, Newcastle-upon-Tyne, a constituent college of the University of Durham, and the University College of South Wales and the Welsh National School of Medicine, which are constituent members of the University of Wales. The fourth group is made up of the general medical schools of the University of London, with the exception of St. Bartholomew's Hospital Medical College and the London (Royal Free Hospital) School of Medicine for Women. Broadly speaking these schools are departments of their parent teaching hospitals. In view of this fact they have sometimes been referred to as hospital medical schools. St. Bartholomew's Hospital Medical College and the London School of Medicine for Women constitute the fifth group; each is a general medical school of the University of London and each is legally incorporated as an educational institution.

2. This appendix deals in broad outline with the scheme of government of the schools in the first three groups. The schools in the fourth and fifth groups have been considered in chapter 2, paragraphs 16-37 of our report.

First group.

3. Basically the schools in the first group have a common form of government. In the Universities of Birmingham, Bristol, Leeds, Liverpool, Manchester and Sheffield the faculty of Medicine (i.e. the medical school), like the other faculties of the university, is controlled by the faculty board, the senate, the university council, and the university court. The usual procedure for the transaction of business is for the faculty board to report to the senate and through the senate to the university council and, when necessary, to the court. The faculty board is responsible for the efficiency of the teaching and the conduct of examinations within its faculty. In general, the senate regulates instruction in all the faculties of the university and is responsible for the well-being and discipline of the students; it is empowered to submit recommendations to the university council on academic appointments. The university council is the chief executive authority of the university, controlling the finances and affairs of the university, instituting and abolishing professorships, readerships and other academic offices and making appointments thereto, drafting statutes and ordinances for submission to the university court, and generally promoting research and instruction. The university court is the supreme governing body of the university, having the power to make, amend and repeal statutes and ordinances.

4. In accordance with normal university practice in this country the teachers have an important place in the administrative machine. The faculty board is composed of the professors and some of the non-professorial teachers in the faculty. The professors, and at some schools representatives of the non-professorial staff, serve on the senate; while in ways that differ from one university to another, the teaching staff is represented on the university council and the university court.

5. At Oxford a Faculty Board, which consists of professors, readers and demonstrators in the medical and related scientific departments of the University and of members elected by the medical graduates, has control over examinations and the teaching of undergraduates and the appointment of demonstrators, and exercises the other ordinary powers of a faculty board. It combines with the other three scientific faculties for the election of five members of the General Board of the Faculties. In addition, a separate committee on which the medical faculty and the hospitals associated with the medical school are represented, deals particularly with the organization of research and with post-graduate studies, largely in the clinical field. The final control over university policy lies with Congregation, but all business in Congregation must be initiated by the Hebdomadal Council. The scheme at Cambridge embraces a faculty board, a general board of faculties, a senate, a council of the senate, which is the main executive body, and the regent house, which is the supreme governing body.

6. The Universities in Scotland are regulated by ordinances which, after being laid before both Houses of Parliament and approved by His Majesty in Council, have the force and effect of an Act of Parliament. The faculty of Medicine is governed in the same way as the other faculties, the form of government being common to all four universities. In each university the control of medical education is in the hands of the faculty of Medicine, the senatus academicus, and the court, the latter corresponding to

the university council of a university in the English provinces. The powers and duties of these various bodies correspond generally to those of the bodies described in paragraph 3 above. The teachers have corresponding opportunities of participating in the administration of the faculty and of the university.

Second group.

7. King's College, London, and University College, London, are all-faculty colleges. In the faculty of Medicine they provide courses of instruction in the pre-medical and pre-clinical subjects. King's College has an agreement with four of the medical schools of the University of London that deal only with the clinical part of the training. Under this agreement students may pursue their pre-medical and pre-clinical studies at King's College and their clinical studies at one or other of these four schools. University College is very closely linked with University College Hospital Medical School. King's College and University College are colleges incorporated in the University. The latter was so incorporated in 1907 and the former in 1910:

8. The administration of King's College has been entrusted to a delegacy and of University College to a college committee. These bodies are appointed by the Senate of the University and are responsible to the Senate of the University for the governance of the two colleges. The Vice-Chancellor of the University is a member of King's College Delegacy. In the case of the committee of University College, the Vice-Chancellor and the Principal of the University have the right to attend meetings of the committee but not to vote. Likewise any member of the University Senate may attend and speak but may not vote at such meetings. Both the delegacy and the college committee are advised by a professorial board; which, in turn, is advised on questions affecting medical education by the college faculty of medical sciences. Teachers of the colleges serve on the delegacy and college committee and the other bodies. The property of the college is vested in the University, which is also in ultimate control of their finances.

Third group.

9. The University of Durham has two divisions—a Durham division and a Newcastle division, the latter division being King's College. The University of Wales comprises four constituent university colleges (those of Aberystwyth, Bangor, Cardiff and Swansea) and the Welsh National School of Medicine. The constituent institutions of each of these universities have their own governing bodies, but they are subject to general control by the university authorities.

10. At the University of Durham the university authorities are the court, in which the ultimate power of the University resides and which controls finance and appoints professors and readers; the senate which is the supreme executive body in academic matters and the boards of the faculties which advise the senate on curricula and examinations. King's College is governed by a council and an academic board. The council is the chief executive body, responsible for the organization of teaching and research, the maintenance of discipline and all matters of research. Its powers include the appointment of teaching staff, other than professors and readers, and the fixing of salaries and the tenure of teaching appointments. The academic board advises the council on academic matters and regulates teaching, promotes research and maintains discipline subject to the control of the council. In the organization of medical education and research it is assisted by a medical studies committee. The appointment of professors and readers is made by the University.

11. The training of medical students of the University of Wales, apart from the instruction of an occasional student who may study biology, chemistry and physics in one of the other colleges of the University, is undertaken in the University College of South Wales and Monmouthshire and in the Welsh National School of Medicine, both of which are situated in Cardiff. The pre-medical and pre-clinical studies are taken at the former and the clinical studies at the latter. The University College is governed by a court of governors, which is the supreme governing body, a council which is the chief executive body and a senate, which is responsible for the promotion of education and research in the College. The Welsh National School of Medicine has a council which is the executive and administrative authority of the school, and a senate which is the academic authority. The University of Wales, which, as already noted, exercises general control over its constituent members, has a university court as its supreme governing body, and a university council as its chief executive body. The council is advised on academic matters by an academic board and deals with all matters relating to teaching and research, settles the terms of appointment of the staff and examines and controls the finance and property of the University. The appointment, payment and removal of professors and other members of the teaching staff

are the responsibility of the constituent institutions, but in the case of professorships and other appointments recognized by the University, selection has to be made by a standing joint selection committee on which the University is fully represented.

APPENDIX E

A note on the history of University College Hospital Medical School, King's College Hospital Medical School and Charing Cross Hospital Medical School.

University College Hospital Medical School.

1. The history of University College Hospital and its medical school is closely bound up with the history of University College, which was opened in 1828. In the early years of the college the "medical classes" were governed by the Corporation and Council of University College. The proprietors and donors of University College were incorporated in 1836 and from that date the "medical classes" were superseded by the newly formed faculty of Medicine. University College Hospital had its beginning in the University Dispensary which was started in 1828. The Dispensary was intended to meet to some extent the deficiency in practical work that was felt in connection with medical instruction at the college. It was managed by a Committee of the Council of University College and was staffed by four of the professors of the college and the demonstrator of anatomy. The Dispensary was soon found to be inadequate, and in 1833 the foundation-stone of the North London Hospital was laid. Since 1851 the full title of the hospital has been the North London or University College Hospital.

2. From 1828 to 1907 the medical school was governed by the Corporation and Council of University College. In 1907, as a result of the reconstitution of the University of London and the passing of the University College (Transfer) Act, 1905, University College was incorporated in the University. It was found that the University could not advantageously and easily incorporate the hospital or that part of the faculty of Medicine that dealt with clinical studies. Hence it was decided to make a separate corporation for carrying on the hospital and the school of clinical studies, the University pledging itself to teach the pre-medical and pre-clinical subjects in the college buildings.

3. The government of the medical school is under the jurisdiction of the general committee of the hospital. There is a school committee consisting of all the independent teachers in the school, and a school finance committee. The school committee has the right to appoint a quarter of the members of the general committee of the hospital and six members of the school finance committee.

King's College Hospital Medical School.

4. King's College Hospital Medical School had its beginning in 1830 as the medical faculty of King's College, London. For the first nine years facilities for the clinical instruction of the students were obtained in various hospitals in the neighbourhood of the college. Then, in 1839, the council of the college founded the first King's College Hospital as a public hospital supported by voluntary contributions because it had found "that hospital practice in connection with, and in the vicinity of, the said college was indispensable for the complete education of its medical students".* From 1830 until the end of 1909, the medical school was governed by the Council of King's College, London; but under the King's College, London (Transfer) Act, 1908, the corporation of the hospital was separated from King's College and the government of the medical school, as well as the management of the hospital, was entrusted to the committee of management of the hospital. Provision was made in the Act for a medical board consisting of the physicians, surgeons, and senior anaesthetist of the hospital, the teacher of hygiene and such other teachers of the medical school as the hospital committee of management may appoint on the recommendation of the medical board. It also provided for a medical school committee, consisting of 4 ex-officio members, 6 members chosen by the medical board, and 6 chosen by the hospital committee of management (one of whom must be the member of the committee of management elected on the nomination of the University of London). It was provided that the medical school committee should administer the affairs of the medical school, including educational finance, and that the medical board should determine the course of study, prescribe the duties of teachers, and submit recommendations to the committee of management for appointments to the staff of the hospital.

Charing Cross Hospital Medical School.

5. Charing Cross Hospital and its medical school were founded together as complementary parts of a single institution, designed "to promote not only the welfare of the Poor, but the improving of the Healing Art and the Good of the Community at large". The hospital was opened at the beginning of 1834 and the medical school

* Extract from the minute book of the Council of King's College, London.

in October of the same year, the scheme which led to their foundation having been propounded many years earlier by Dr. Benjamin Golding. The provision of a combined hospital and medical school as integral parts of an institution "where practical information may be conjoined with scientific instruction" was an innovation in London.

APPENDIX F

A note on suggestions made by medical schools of the University of London regarding action which they hope the University authorities may be able to take.

[See also Chapter 2, paragraph 37.]

1. One of the suggestions is that the University should appoint an officer who is keenly interested in medical education and whose chief function it would be to act, under the direction of the Principal of the University, as liaison officer between the medical schools and the University. It was thought that this officer need not be a medical person; some considered that it would be better if he were a layman. We consider that such an appointment would be most helpful. If such an officer attended meetings of the governing bodies of the various medical schools (he might be one of the official representatives of the University) he would gain an intimate and all-round view of the development of medical education in London, and besides serving as a link between the University and the schools, would be able to promote a greater inter-school knowledge of questions of policy, and help to bind the schools together.

2. Another suggestion is that each medical school, as such, should be represented on at least one main committee of the University. On the University Senate, which has a total membership of 55, the 12 medical schools together have only 2 representatives.* These representatives are elected from among themselves by the deans of the medical schools. Having regard to the number of these schools and to the fact that the medical students constitute nearly 40 per cent. of the total number of students taking full-time courses at the various colleges and schools of the University, this representation seems inadequate. Further, under existing arrangements, it is possible for some medical schools, even large schools, not to be represented on any of the main committees of the University. Many years ago a body known as the conference of deans and delegates of the metropolitan medical schools was formed. This body is a purely unofficial one, but it meets to discuss matters of general interest to all the medical schools, and has, we understand, proved of value in university affairs. We have received a tentative suggestion that this conference might receive official recognition in the university statutes, for example, as an advisory committee to the board of the faculty of Medicine or to the Collegiate Council. There are signs, however, that this particular suggestion would not meet with universal approval. On the main issue, we commend to the consideration of the university authorities the question of whether a suitably constituted committee, able to view in the light of intimate knowledge the work of the medical schools as a whole, would be a useful element in the organization of the University.

3. A third suggestion is that the clinical teachers in the medical schools should be given opportunities to play a larger part in developing and directing the policy of the University with regard to medical education and research. The conditions that give rise to this suggestion are summed up in the following extract from the memorandum of evidence received from Guy's Hospital Medical School:—

"In spite of the fact that the metropolitan medical schools have been Constituent Schools of the University for nearly fifty years, many of their teaching staff still feel remote from University affairs and cut off from any share in directing its policy. This is largely because the great size of the Faculty of Medicine tends to concentrate the control of its activities in the hands of a small number of its members, a condition of affairs that clearly has its weak as well as its strong points. In most subjects the main link of association between the University and its Teachers in the various schools is through their membership of one of its many Boards of Studies. The various Boards in the pre-clinical subjects now include all the senior teachers in these subjects, but only two Boards—those in Advanced Medical Studies and in Pathology—supervise studies in the clinical subjects and the representatives on the two Boards are only a very small part of the whole body of teachers in Medicine, Surgery and their various branches. Since it is these latter who form the main body of teachers, and who have the largest share in guiding the policies of their respective schools, this serious under-representation of clinical teachers has led to a weakness in the link between the University and its Constituent Schools that should have been forged with particular care."

* In addition to these representatives, the faculty of Medicine elects 3 members and the registered graduates in Medicine 2 members.

Guy's Hospital Medical School suggested the establishment within the University of a committee made up of representatives from both the pre-clinical and clinical teaching staffs of all medical schools, to advise the University upon all matters relating to their activities. We do not express a final opinion on this suggestion. It might be treated as a variant of the second suggestion we have noted above. Alternatively, the view may be held that the appointment, in course of time, of more whole-time clinical professors, as we recommend*, will lessen to some extent the present divorce of clinical teachers from university affairs, since these professors will automatically become members of the boards of studies in their respective subjects, and that little more can reasonably be expected.

4. Other suggestions are (i) that the University should develop the system of inter-collegiate teaching in the faculty of Medicine, and (ii) that, for the development of the corporate life of the University, the University should provide central common and dining rooms which would encourage members of all faculties to meet informally with each other and with senior officers of the University, and further, that more adequate provision should be made for the corporate life of the students of the University. In this latter respect, it has been stated that the provision of a social and residential centre or centres to which students of all faculties would be attracted would "serve to broaden the basis of education in directions which at the present moment are lacking and would develop a university 'esprit de corps' which is so much to be desired."†

APPENDIX G.

Teaching accommodation and equipment in a medical teaching centre.

Non-clinical departments.

1. In many schools teaching and research in the non-clinical departments, such as anatomy and physiology, are seriously hampered by deficiencies in accommodation and equipment. In some cases buildings are old-fashioned and unsuitable. Lecture theatres are too small and sometimes badly ventilated. Laboratory accommodation is inadequate in most schools, with the result that laboratories are often overcrowded, and frequently it is necessary for practical classes to be duplicated (in some cases triplicated). Such conditions are not conducive to good teaching. A shortage of classrooms and demonstration rooms exists in many instances, and a lack of rooms for the research work of members of the staff and of research students has also been reported to us.

2. Extensive alterations and additions will be necessary if the accommodation in the medical schools for the non-clinical departments is to be adequate for even the present entries of students. In some cases a completely new building is required for the whole of the medical school. Should larger entries of students be needed to meet the post-war demand for doctors, the extent of the building additions will be increased and their provision made even more urgent. At some schools the enlargement of the accommodation will have to be made before any increase will be possible in the number of students admitted.

Centralization of accommodation and equipment.

3. Before we consider accommodation for the departments of pathology and for the clinical departments we wish to refer to the desirability, on grounds of efficiency, convenience and economy, of centralizing services and accommodation to the greatest possible extent. The principle of centralization can be applied, among other things, to the laboratories, to the photographic and art departments, to the library, the museum, and the collection of lantern and microscope slides, to the mechanical and carpentry workshops, to records, and to stores and purchasing. If laboratories for different subjects, particularly research laboratories, are grouped together, not only may it be possible to effect an economy of accommodation by arranging for some of them to be interchangeable between different departments, but academic advantages may accrue from the bringing into closer contact of investigators in the different departments. In the case of the library, the main collection can be centrally housed, while the various departments retain small departmental collections of representative books to which students may wish to refer in the course of their work in the departments. It is desirable, however, that these departmental collections should be regarded as parts of the general library of the medical school, all the books being catalogued centrally. Whenever feasible, owing to the close proximity of the anatomy and pathology departments, the housing of their main collection of specimens in a single museum is to be commended. As with the library, the main collection can be supplemented by small collections of specimens used for teaching purposes by the various departments.

* See Chapter 4, paragraph 25.

† Memorandum of evidence from Guy's Hospital Medical School.

4. With regard to a central animal house, some persons consider that the animals required by the physiology and other non-clinical departments should be housed separately from those required by the pathology and clinical departments. Their main reasons are (i) the desirability of the animals being kept fairly near to the workers who are using them, and (ii) the risk of cross-infection of the animals. Under existing conditions the non-clinical departments are often situated some distance away from the pathology and clinical departments. In these circumstances a common animal house would probably give rise to difficulties. These difficulties will not, however, arise if, as we have recommended, medical teaching centres are developed as compact geographical units, and if much of their laboratory accommodation is centralized. With regard to the risk of cross-infection, it would be necessary for the attendants looking after the animals to be trained and fully experienced in the procedures necessary for the prevention of cross-infection. If this condition is satisfied a single animal house serving all departments is not open to objection, but, on the contrary, is to be welcomed on grounds of economy in space and money.

5. Much saving of time and material would be effected if more use were made in this country of the services of men specially trained and proficient in the technique of investigating surgical problems in the laboratory. The possibilities of help from this speciality within a speciality should be more widely known and utilized. From time to time a medical man will be found who has little interest in or aptitude for dealing with patients, but who is keenly interested in technical problems. Such a man might well be encouraged to train in the laboratory methods of investigating such problems. When a person so trained is available in a teaching centre, he should be provided with a properly equipped department, and investigators in all the other departments of the centre should be able to call on him for assistance when necessary.

Pathology.

6. Apart from lecture theatres and premises for various services, that for the sake of efficiency and economy are better centralized, the main accommodation for the division of pathology should form a compact block in or adjacent to the parent teaching hospital. In those cases in which other hospitals that are constituent parts of the teaching centre are situated some distance away from the parent teaching hospital it will be necessary for the department of clinical pathology to have subsidiary laboratories in such other hospitals in addition to its laboratories in this block.

7. The accommodation in the main block should include (i) museums (in some cases these may be combined with the anatomy museum and centralized elsewhere); (ii) mortuary and accommodation for post-mortem examinations and class demonstrations; (iii) accommodation for staff; (iv) classroom laboratories; (v) laboratory accommodation (other than the small ward laboratories) for hospital routine investigations; (vi) laboratories for research. The main public health bacteriological laboratory and the central laboratory for the clinical laboratory pathological service for the area or region surrounding the teaching centre should also, if possible, be housed in this block.

8. The classroom laboratories should be as close as possible to the main laboratories for hospital investigations. It is convenient to have all material and apparatus at hand, and the association of the classroom laboratories with the laboratories for hospital work is likely to help students to realize that pathology is part of clinical medicine and not an academic ancillary service. Histology, bacteriology and clinical pathology require similar types of apparatus and bench facilities, and can be taught in the same laboratory classroom. Chemical pathology, on the other hand, requires a separate classroom laboratory since the necessary bench arrangements are different.

9. The laboratory accommodation for hospital investigation. The main laboratories of the various departments should preferably be separate but adjacent. To them should be attached suitable rooms for, among other things, preparation of media, sterilization of equipment, dark rooms for certain special investigations, rooms for the examination of patients or the carrying out of special tests on patients and waiting rooms for patients. As part of the accommodation of the department of clinical pathology there should be a central clearing room for requests and specimens and for the filing of records. The ward laboratories can be small. They should be attached to each ward or group of wards, equipped for simple routine investigations and available for the use of resident house officers, students and nurses.

10. Laboratories for research should include small rooms for the regular staff of the departments and also a group of laboratories equipped for one or more special research workers who may be attached to the division from time to time.

11. The staff of the division will also require the use of an animal house, an animal operating theatre, a photographic department and a mechanical and carpentry workshop. As we have indicated above, we consider that these facilities will also be required by other departments, and unnecessary duplication will be avoided by centralizing these services and making them available to all departments.

Clinical departments.

12. In considering the accommodation and equipment for the clinical departments, we are concerned primarily with the facilities in the teaching hospitals and particularly in the parent teaching hospital. Few clinical departments are adequately housed and equipped at the present time. We cannot do more than give a very general picture of the kind of facilities that should be available. Clearly there are bound to be wide variations between schools according to local circumstances (e.g., the distance of the medical school from the teaching hospitals; the distribution of the teaching work between the parent and associated teaching hospitals).

13. Some accommodation could be used by all the departments. The accommodation in this class includes:—

A large lecture theatre, equipped with lantern, epidiascope, cinema projector, viewing boxes for X-ray films, projector for microscope slides, examination tables, patients' waiting rooms and dressing cubicles.

A staff room where the staff can meet for the discussion of educational problems.

A room where a "working" collection of pathological specimens could be kept.

A library and reading room—the library being an outlier of the medical school library.

Several small research laboratories (or one large laboratory divisible by partitions) equipped with gas, electricity, water, and compressed air.

A small unit for metabolism investigations, consisting of a series of single or double rooms, with a special kitchen and small laboratory adjacent.

A demonstration room.

Photographic rooms.

14. Other accommodation should be allocated specifically to particular departments within the various divisions. In the case of the departments of general medicine and surgery, this accommodation should include staff rooms, seminar rooms, students' writing room, records room and "follow-up" room. With regard to the latter, a central "follow-up" room for all departments might in some cases be preferred.

15. In the division of obstetrics and gynaecology, the accommodation would follow much the same general pattern. Whether the division was able to use the central lecture theatre or had a theatre of its own would depend upon whether or not the headquarters of the division was in the parent teaching hospital or in one of the other hospitals. A special need is a students' working room in immediate proximity to the labour ward.

16. Whether in medicine, surgery or obstetrics and gynaecology, the big mixed ward is not ideal for teaching purposes. The best type of ward in a teaching hospital is probably one which can be sub-divided into groups of four to eight beds, with a proportion of single-bedded rooms. This arrangement permits the grouping of beds by disease; minimizes the risk of cross-infection, and allows for isolation and for a certain amount of privacy when necessary or desired.

17. We have already recommended in chapter 9, paragraphs 26 to 31, that a fuller and better use should be made of the training facilities offered in out-patient departments and have recorded that one of the conditions that frequently hampers such a development is the cramped and ill-planned accommodation in the out-patient departments. In a teaching hospital the space provided for out-patient departments should be larger than in a non-teaching hospital, since the requirements of a teaching programme frequently make it necessary for clinics in a teaching hospital to be held simultaneously. In a non-teaching hospital, on the other hand, it is possible to arrange for one clinic to follow another. In addition to requiring a larger proportion of ordinary examination rooms, the teaching hospital also needs extra rooms for the examination of patients by students. The separation, on arrival, of new patients from old, which is essential in all out-patient departments of a teaching hospital, is also likely to call for an increase in accommodation.

18. The requirements of the various clinical departments will vary, and it is not possible to state in detail what these should be. It may be necessary to provide the special departments with their own suite of rooms comprising the necessary auxiliary accommodation. For example, an ophthalmic out-patient department requires an operating theatre, dark room, refraction rooms and dressing theatre with suitable lighting equipment.

19. Our recommendation (chapter 9, paragraphs 39 to 41) that students should be required, during the clinical part of their training, to reside in hospital for six months, will mean that almost all the teaching hospitals will have to extend greatly, in some cases will have to make entirely new provision for, the residential accommodation of students.

APPENDIX H

Statement shewing where in 1938-1939 teaching in the various main subjects was conducted and the bed complements on 31st December, 1938, of the main teaching hospital(s) and of other hospitals used for teaching purposes.

Code

P.=parent teaching hospital

V.=voluntary hospitals

M.=municipal hospital

Names of School, Hospitals used and distances of Hospitals from School	Student Entry	Medicine		Surgery			Interchangeable	Gynaecological	Obstetric	Children		
		General	Chronic	General	Orthop. and Fracture	Other Special Surgery				Infant Welfare	Medical	Surgical
UNIVERSITY OF BIRMINGHAM	56											
P.V. United Hospital												
(i) General Hospital ... 4 miles		126		206				26	E	E	11	11
(ii) Qn. Eliz. Hospital* ... adjacent		180		204		22		30	21	E		
V. Children's Hospital ... 2 miles					8						111	55
V. Maternity Hospital ...									X (73)	Y		
M. City Hospital for Infectious Diseases ... 4 miles												
M. City Mental Hospital ... 4 miles												
BRISTOL UNIVERSITY	33											
P.V. Royal Infirmary ... 1 mile		100		118	25			31	41		15	11
(ii) General Hospital ... 2 miles		71		83				16	18		8	8
V. Hospital for Sick Children and Women ... 1 mile											X (99)	X
V. Winford Orthop. Hospital ... 7 miles					X (55)							
V. Eye Hospital ... 1 mile												
M. Southmead Hospital ... 4 miles			X (153)						X (44)			
M. Winsley Sanatorium ... 16 miles												
M. Ham Green Fever Hosp... 6 miles												
M. Mental Hospital, Fishponds ... 6 miles												
DURHAM UNIVERSITY (King's College, Newcastle-on-Tyne)	50											
P.V. Royal Victoria Infirmary opposite College		160		253	50			30	E	Y	28	33
V. Princess Mary Maternity Hospital ... 1 mile									X (90)			
V. Fleming Memorial Hospital for Sick Children† ... 1 mile											X (30)	X (58)
M. Newcastle General Hospital												
M. City Hospital for Infectious Diseases ... 4 miles												
M. City Mental Hospital ... 3 miles												
LEEDS UNIVERSITY	77											
P.V. General Infirmary ... adjacent		110		162	63	12		E	E	Y	42	34
V. Maternity Hospital ... 1 mile									X (140)	Y		
V. Hospital for Women ...								X (89)				
M. City Fever Hospital ...												
M. West Riding Mental Hospital												

NOTES :—* Average figures for 1939-1942.

† Not at present being used.

† Figures for 1941.

APPENDIX H

Code—cont.

E.=teaching in this subject not conducted in main teaching hospital

X.=figures in brackets denote total number of beds available but not all necessarily utilised for teaching purposes

Y.=Infant welfare clinics

Student Entry = average annual intake of students to the *clinical* part of the course 1937-1939

Special Subjects								Ordinary Beds			Private Beds		Length of stay per patient (in days) [Parent hospital only]	New out-patients in 1938 [Parent hospital only]
Ear, Nose and Throat	Eyes	Skin	Psychological Medicine	Tuberculosis	Veneral Diseases	Infectious Diseases	Miscellaneous	Total	Total available for Teaching	Daily average occupation	Available for Teaching	Non-Teaching		
22	4	6	E		14	E	19	445	445		50		17.23	12,530
44	23	8	E			E	6	538	538		91		20.6	2,797†
32	3	3				14	2	228	228		20			
						X (592)		75	75	75				
			X (1,091)					592						
								1,091						
29		6	E	E	6	E	28	410	392	370.2		15	14.2	59,918
14	4	2	E	E		E	42	266	266	249.7		3	16.56	18,678
	X (72)							107				6		
								110						
								72				12		
								423						
				X (135)				135						
				X (160)		X (339)		499						
			X (1,079)					1,079						
19	19	24	E		E	E		616	616	568		86	13.9	130,789
								90						
								88						
					X (31)			879						
						X (344)		344						
			X (1,087)					1,087						
37	50	16	E			E	46	572	572	512			13.4	64,398
								140	140	135				
								89	33			12		
						X (489)		489						
			X (1,632)					1,632						

Names of School, Hospitals used and distances of Hospitals from School	Student Entry	Medicine		Surgery			Interchangeable	Gynaecological	Obstetric	Children		
		General	Chronic	General	Orthop. and Fracture	Other Special Surgery				Infant Welfare	Medical	Surgical
LIVERPOOL UNIVERSITY	74											
P.V. Royal Liverpool United Hospital												
(i) Royal Infirmary ... adjoining		104		145	30			19	17			
(ii) David Lewis Northern Hospital 1½ miles		64		80	22			10			10	10
(iii) Royal Southern Hospital 1½ miles		65		77	24			5			8	8
(iv) Liverpool Stanley Hospital 3½ miles							96	16				
V. Maternity Hospital* ... ½ mile									X (107)			
V. Royal Liverpool Children's Hospital (City Branch) ½ mile					X (22)						X (54)	X (42)
V. Women's Hospital ... ½ mile									X (101)			
V. Eye, Ear and Throat Infirmary ½ mile												
V. St. Paul's Eye Hospital ... 1½ miles												
M. Mill Road Infirmary ... 1 mile									X (87)			
M. Smithdown Rd. Hospital 2½ miles									(130)			
M. Walton Hospital ... 4 miles									X (211)			
M. Alder Hey Hospital† ... 4 miles					X (180)						X (564)	X
M. City Hospital for Infectious Diseases 5½ miles												
M. City Mental Hospital ... 9 miles												
MANCHESTER UNIVERSITY	75											
P.V. Manchester Royal Inf. ½ mile		192		240	36	24		18	E			18
V. Barnes Convalescent Home, Cheadle					X (60)							
V. St. Mary's Hospital for Women and Children								X (134)	X (101)	Y	X (50)	X
V. Royal Manchester Children's Hospital 4½ miles										Y	X (90)	X (90)
V. Duchess of York Hospital for Babies 2½ miles										Y	X (73)	X (10)
V. Salford Royal Hospital ... 2½ miles					X (38)							
V. Manchester Royal Eye Hospital Two-thirds of mile												
V. Manchester Hospital for Skin Diseases 1½ miles												
V. Manchester Ear Hospital Two-fifths of mile												
V. Ancoats Hospital ... 1½ miles		X (28)		X (42)	X (10)		X (30)	X (2)			X (21)	X
M. Manchester Hospital for Consumption (i) Bowden (E.N.T.) ...												
(ii) Delamere ...												
M. Monsall Hospital ...												
M. Stockport Isolation Hospital												
M. City Mental Hospitals ...												

Notes :—* 107 obstetric beds include 42 beds available at Chatham St. Annexe.

† Used unofficially for teaching.

Special Subjects								Ordinary Beds			Private Beds		Length of stay per patient (in days) (Parent hospital only)	New out-patients in 1938 (Parent hospital only)
Ear, Nose and Throat	Eyes	Skin	Psychological Medicine	Tuberculosis	Veneral Diseases	Infectious Diseases	Miscellaneous	Total	Total available for Teaching	Daily average occupation	Available for Teaching	Non-Teaching		
6	5				2	E	16	344	344		22		15.78	56,650
8		2				E		206	206	181	14		18.2	24,485
4	2	4	2			E	8	207	207	193	25		17.47	29,838
4						E		116	116	100	4		21.63	25,456
								107	107					
X (6)							X (12)	136	136	121.9				
								101	101	85	17			
	X (36)							72	36	44.4	8			
	X (76)							76	76	35.7	7			
								690						
								1,208						
								1,741						
X (60)	X (30)					X (364)	X (96)	930	360					
								364						
			X (2,833)					2,833						
21			E	E		E	100	649	531	549		100	18.4	21,549
								136						
								285						
							X (12)	192						
								83						
								242						
								168						
	X (168)							44				9		
		X (44)										10		
X (30)								30						
X (8)								141				10		
								48						
				X (48)										
				X (110)				110						
						X (601)		601						
			X			X (120)		120						

Names of School, Hospitals used and distances of Hospitals from School	Student Entry	Medicine		Surgery			Interchangeable	Gynaecological	Obstetric	Children		
		General	Chronic	General	Orthop. and Fracture	Other Special Surgery				Infant Welfare	Medical	Surgical
SHEFFIELD UNIVERSITY P.V. Royal Sheffield Infirmary and Hospital (i) Royal Infirmary ½ mile (ii) Royal Hospital ... ½ mile V. Jessop Hospital for Women ½ mile V. Children's Hospital ... 100 yards M. City General Hospital ... 3 miles M. Crimicar Lane Hospital ... 2½ miles M. Winter Street Hospital ... 200 yards M. Lodge Moor Hospital ... 3 miles M. S. Yorks Mental Hospital 4 miles	26	109		160	44			E E X (64)	E E X (36)	Y	13 14 X (50)	16 13 X (62)
WELSH NATIONAL SCHOOL OF MEDICINE P.V. Royal Infirmary ... ½ mile V. Prince of Wales Ortho- pædic Hospital 100 yards M. Cefn Mably Hospital ... 8 miles Glan Ely Hospital ... 3 miles Sully Hospital ... 4 miles The above are Welsh National Mem. Assoc. Hospitals and are in the locality of Cardiff. M. Lord Pontypridd Children's Hospital M. Llandough Hospital ... 3½ miles M. City Lodge Hospital ... 1½ miles M. City Isolation Hospital ... 2 miles M. City Mental Hospital ... 3½ miles	48	92		161*	X (64)	32†				Y	13	29
CHARING CROSS HOSPITAL P.V. Charing Cross Hospital V. Lock Hospital ... 1 mile V. Frimley Sanatorium ... 33½ miles M. St. Charles Hospital, L.C.C. 4 miles M. Park Hospital, Hither Green, L.C.C. 6 miles M. Banstead Hospital, L.C.C. 12 miles M. Caterham Mental Hospital, L.C.C. 20½ miles	30	95	E	91	14		12	22	19	Y	(20)	

NOTES :—* Including fractures.

† Including gynaecology.

** Including isolation and maternity.

Special Subjects								Ordinary Beds			Private beds		Length of stay per patient (in days) [Parent hospital only]	New out-patients in 1938 [Parent hospital only]
Ear, Nose and Throat	Eyes	Skin	Psychological Medicine	Tuberculosis	Veneral Diseases	Infectious Diseases	Miscellaneous	Total	Total available for Teaching	Daily average occupation	Available for Teaching	Non-Teaching		
31 26	69 36	13		E E X (104) X (84) X (2,000)	 X (4)		21 X (8) X (508)	476 299 104 120 898 104 112 508 2,000				30	21 20	40,486 22,090
18 X (9)	21		E	E X (108) X (196) X (300)	 X (43) X (24)	E	39**	405 64 108 196 300 25 345 591 230 800	405 64 108 196 300 25 345 591 230 800	403 61 106 192 296 21 300 510 155 790			21-19	22,079
14		4	E	E X (150) X (2,747) X (2,159)	E X (21)	E	2 X (632)	293 64 150 752 632 2,747 2,159	293	256			18-5	30,766

Names of School, Hospitals used and distances of Hospitals from School	Student Entry	Medicine		Surgery			Interchangeable	Gynaecological	Obstetric	Children		
		General	Chronic	General	Orthop. and Fracture	Other Special Surgery				Infant Welfare	Medical	Surgical
GUY'S HOSPITAL P.V. Guy's Hospital... M. St. Alfege's Hospital,* L.C.C. 5 miles M. Lambeth Hospital*, L.C.C. 2 miles M. St. Olave's Hospital*, L.C.C. 2 miles M. Park Hospital, L.C.C. ... 6 miles M. Bexley Mental Hospital, L.C.C. 13½ miles M. Fountain Hospital,† L.C.C. 4 miles	97	151	X (230)	132	57	34		18	50 X (51)		30	16
KING'S COLLEGE HOSPITAL P.V. King's College Hospital M. Lewisham Hospital ... 3 miles M. Dulwich Hospital ... 1 mile ... M. St. Giles's Hospital, Camberwell ½ mile M. Grove Hospital, L.C.C., Tooting 4 miles M. Maudsley Hospital, L.C.C., Denmark Hill adjacent	50	51	X (202)	63	28	25	X (501) X (105)	16	24 X (64) X (40)		19	35
LONDON HOSPITAL P.V. London Hospital ... V. Southend General Hospital 36 miles M. Mile End Hospital, L.C.C. 1 mile M. Eastern Fever Hospital ... L.C.C.† 1 mile M. Camberwell House Mental Hospital, L.C.C. 5 miles	75	249		300				33	42 X (8) X (58)	Y	37	42
LONDON SCHOOL OF MEDICINE FOR WOMEN P.V. Royal Free Hospital ... ½ mile V. Elizabeth Garrett Ander- son Hospital 15 mins. V. South London Hospital ... 5 miles V. Great Ormond Street Hospital 10 mins. V. Royal Cancer Hospital, Fulham 5 miles V. National Hospital for Nervous Diseases 10 mins. V. Royal London Ophthalmic Hospital ½ mile V. Central London Ophthal- mic Hospital 2 mins.	57	68	E	66	9	X (127)		33	58 X (7) X (38)	Y Y	26 X (146)	11 X (144)

NOTES :—* Demonstrations, principally for Final year Students, were held at periodic intervals at L.C.C. hospitals.
† The lecturer in Psychological Medicine gave occasional demonstrations at the Fountain Hospital.

Special Subjects								Ordinary Beds			Private Beds		Length of stay per patient (in days) [Parent hospital only]	New out-patients in 1938 [Parent hospital only]
Ear, Nose and Throat	Eyes	Skin	Psychological Medicine	Tuberculosis	Veneral Diseases	Infectious Diseases	Miscellaneous	Total	Total available for Teaching	Daily average occupation	Available for Teaching	Non-Teaching		
31	20	14	5		9	E	51	618 618 1,100 688 632 2,273 670	618	522		77	18	90,534
			X (2,273) X (670)			X (632)								
22	12	2			4	E	21	328 781 723 810 616 235	328	268		92	15.79	41,167
			X (235)			X (616)								
27	17					E	92	839 218 466 621 420	839	711		52	18.05	98,419
			X (420)			X (621)								
23	3	2	E		10	E	14	303 92 115 290 127 157 161 40				24 13 36 29 29 39 11	17	29,917
	X (161) X (40)						X (157)							

Names of School, Hospitals used and distances of Hospitals from School	Student Entry	Medicine		Surgery			Interchangeable	Gynaecologica	Obstetric	Children		
		General	Chronic	General	Orthop. and Fracture	Other Special Surgery				Infant Welfare	Medical	Surgical
London School of Medicine for Women (cont.) V. Brompton Hospital, Fulham 4½ miles M. Queen Mary's Hospital for Children, L.C.C., Carshalton 12½ miles M. St. Mary, Islington Hospital, L.C.C. 2½ miles M. Highgate Hospital ... 3½ miles M. St. Pancras Hospital ... 15 mins. M. North Eastern Fever Hospital 4 miles M. Horton Hospital, Epsom, L.C.C. 15½ miles			X (364) X (187) X (150)		X (90)							
MIDDLESEX HOSPITAL P.V. Middlesex Hospital ... V. Queen Mary's Hospital, Stratford ¼ hour M. St. Mary Abbot's Hospital, L.C.C. 3 miles M. Archway Hospital, L.C.C. ¼ hour M. North Eastern Fever Hospital 5½ miles M. Springfield Mental Hospital, L.C.C. 6½ miles	80	114		143	28			23	12 X (50) X (46)	Y		24
ST. BARTHOLOMEW'S HOSPITAL P.V. St. Bartholomew's Hospital 3 mins. V. City of London Maternity Hospital 1 mile V. Alexandra Hospital for Children, Swanley 17 miles V. Bethlem Royal Hospital for Mental Disorders, Beckenham 12 miles M. St. Giles' Hospital, L.C.C. 6 miles M. St. Andrew's-by-Bow ... 7 miles M. Hackney Hospital 5 miles M. Bethnal Green Hospital ... 3 miles M. Park Hospital ... 7 miles	120	234		250	20		11	30	50 X (68) X (52) X (36)			18

NOTES :—* Including neurological.

Ear, Nose and Throat	Special Subjects							Ordinary Beds			Private Beds		Length of stay per patient (in days) [Parent hospital only]	New out-patients in 1938 (Parent hospital only)
	Eyes	Skin	Psychological Medicine	Tuberculosis	Veneral Diseases	Infectious Diseases	Miscellaneous	Total	Total available for Teaching	Daily average occupation	Available for Teaching	Non-Teaching		
				X (150)				150						
								1,313						
								836						
								545						
								580						
						X (760)		760						
			X (2,178)					2,178						
26	8	8	21*			E	123	540	540	508		74	21.09	68,846]
								219						
								545						
								564						
						X (760)		760						
			X (2,033)					2,033						
22	22	6	4			E	96	763	263	649.2			19.4	34,962
							X (3)	71	71					
								111						
			X (250)				X (68)	250						
								810						
								626						
								746						
								650						
						X (632)		632						

Names of School, Hospitals used and distances of Hospitals from School	Student Entry	Medicine		Surgery			Interchangeable	Gynaecological	Obstetric	Children		
		General	Chronic	General	Orthop. and Fracture	Other Special Surgery				Infant Welfare	Medical	Surgical
ST. GEORGE'S HOSPITAL P.V. St. George's Hospital ... M. St. Mary Abbot's Hospital 1½-2 miles M. Lewisham Hospital ... 5-6 miles M. The Grove Hospital, Tooting 7 miles M. Maudsley Hospital, L.C.C. 4½ miles	33	95 X (123)		109 X (100)	42			15	13 X (64)		11	5
ST. MARY'S HOSPITAL P.V. St. Mary's Hospital ... V. Queen Charlotte's Mater- nity Hospital 4 miles V. Brompton Hospital ... 2½ miles V. Royal Nat. Orthopaedic Hospital (Stanmore Br.) 13 miles M. Paddington Hospital, L.C.C. 10 mins. M. Western Fever Hospital, L.C.C. 3 miles M. St. Bernard's Hospital, Hanwell 5½ miles	70	106		122	21 X (276)	2		28 X (100)	28 X (59)		24	8
ST. THOMAS'S HOSPITAL P.V. St. Thomas's Hospital M. St. James's Hospital, Balham, L.C.C. 4½ miles M. South Western Fever Hospital, L.C.C. 2½ miles M. Springfield Mental Hos- pital, Tooting 6 miles	90	186		192	48			30	22 X (78)	Y	18	14
UNIVERSITY COLLEGE HOSPITAL P.V. University College Hospital M. St. Mary's Hospital, Islington, L.C.C. 4½ miles M. North Western Fever Hospital, L.C.C.	74	122	E	152	6	10		30	55	Y	32	15
WESTMINSTER HOSPITAL P.V. Westminster Hospital* 100 yards. M. St. Stephen's Hospital, L.C.C. 3½ miles M. Springfield Mental Hospital 5½ miles	36	77 X (366)		77 X (112)	23 X (56)		20	17	26 X (26)		19	12
WEST LONDON HOSPITAL P.V. West London Hospital V. Royal Chest Hospital ... approx. 6 miles M. West Middlesex Co. Hos- pital approx. 2 miles M. Western Fever Hospital, L.C.C. approx. ½ mile M. Maudsley Hospital, L.C.C. approx. 1½ miles	14†	42		80		22	2	6	X (79)		14	12

NOTES :—*Figures for new hospital opened 1st January, 1939.

† School founded in 1937, present intake 24 a year.

** Including 26 pay beds.

Special Subjects								Ordinary Beds			Private Beds		Length of stay per patient (in days) [Parent hospital only]	New out-patients in 1938 [Parent hospital only]
Ear, Nose and Throat	Eyes	Skin	Psychological Medicine	Tuberculosis	Veneral Diseases	Infectious Diseases	Miscellaneous	Total	Total available for Teaching	Daily average occupation	Available for Teaching	Non-Teaching		
11	14	4	E X (233)			E X (616)	15	334 545 781 616 235	319	2806			18.76	29,174
17	12	6	E X (2,183)	E X (150)	10	E X (517)	26 X (30)	410 330 350 276 658 517 2,483	410	389.9		66	18.8	52,977
31	25		E X (2,033)	10	17	E X (363)	49	642 898 363 2,033	642	563.5		40	17.35	110,000
41	10	18	10	10	4	E X (410)	25	540 836 410	540	475.8		77	19.9	89,944
17	16	22	6 X (2,033)	X (56)	X (70)	E X (60)	2	334 746 2,033	334	230	66		18.48	28,206
7	5	3	E X (235)	X (85)		E X (517)	12	213 85 1,267 517 235	213	203.2		26	** 16.32	43,57

Names of School, Hospitals used and distances of Hospitals from School	Student Entry†	Medicine		Surgery			Interchangeable	Gynaecological	Obstetric	Children		
		General	Chronic	General	Orthop. and Fracture	Other Special Surgery				Infant Welfare	Medical	Surgical
UNIVERSITY OF ABERDEEN	90											
P.V. Royal Infirmary ... on site		92		168	30	24	18	30	E	E	E	E
V. Maternity Hospital ... on site									X (51)			
V. Royal Aberdeen Hospital for Sick Children ... on site										X (10)	X (38)	X (56)
V. Royal Mental Hospital ... 1½ miles												
M. Woodend Hospital ... 1½ miles		X (44)	X (44)	X (58)	X (8)			X (10)	X (6)			
M. Infectious Diseases Hos- pital ... 3 miles												
UNIVERSITY OF EDINBURGH	203*											
P.V. Royal Infirmary ... 5 mins.		375		398	20			90	E	E	E	E
V. Simpson Maternity Hospital** 5 mins.									X (126)	Y		
V. Royal Hospital for Sick Children ... 10 mins.											X (70)	X (50)
V. Princess Margaret Rose Hospital for Crippled Children ... 5 miles					X (125)							
V. Royal Victoria Hospital for Tuberculosis ... 3 miles												
V. Royal Hospital for Mental Disorders (including Jor- danburn Nerve Hospital) 1 mile												
M. Western General Hospital 3-4 miles		X (86)		X (70)					X (40)		X (42)	
M. Eastern General Hos- pital*** 3-4 miles			X (271)									
M. Northern General Hos- pital ... 3-4 miles			X (280)									
M. City Hospital for Infectious Diseases ... 3 miles												
UNIVERSITY OF GLASGOW	195†											
P.V. Royal Infirmary ... 2½ miles		225		415		44		44	E			
P.V. Western Infirmary ... adjacent		175		358				20	E	E	E	E
P.V. Victoria Infirmary ... 4 miles		104		233				26	E	E	E	E
P.V. Royal Hospital for Sick Children ... ½ mile											94	194
P.V. Royal Maternity and Women's Hospital ... 2 miles									149	Y		
P.V. Royal Samaritan Hos- pital for Women ... 3 miles								X (156)				
V. Bridge of Weir Sanatorium 15 miles												
V. Royal Mental Hospital ... 1½ miles												
V. Eye Infirmary ... ½ mile												
V. Ear, nose and throat Hospital ... 1 mile												

NOTES :—* Excluding students preparing for the Scottish Triple Qualification.

** Opened March, 1939.

*** Used to some extent for undergraduate teaching.

† Inclusive of a small number of students who (i) transferred from other universities and (ii) took a combined course in Science and Medicine.

Ear, Nose and Throat	Special Subjects							Ordinary Beds			Private Beds		Length of stay per patient (in days) [Parent hospital only]	New out-patients in 1936 [Parent hospital only]
	Eyes	Skin	Psychological Medicine	Tuberculosis	Venereal Diseases	Infectious Diseases	Miscellaneous	Total	Total available for Teaching	Daily average occupation	Available for Teaching	Non-Teaching		
34	34	18	4	E		E	48	500	500	504			17	29,956
X (24)	X (10)	X (12)						51	51	51				
			X (600)	X (156)	X (20)	X (213)	X (8)	150	138	125				
				X (35)	X (12)			950	600			350		
X (20)	X (5)			X (35)	X (12)			354	354	337				
								285	285	235				
59	64	46			39	E	50	1,141	1,141	997.7	20		16.6	75,662
X (16)								126	126	126				
								136	136	135				
								125						
				X (76)				76	76	76				
			X (942)					942	942					
		X (10)						248	248	198		15		
		X (20)		X (20)				311	311	226				
					X (23)			303	303	208				
				X (213)		X (566)		799	799	463				
42	36	20	E	E	E	E	10		836	831			16.9	114,249
30	20	22	E	E	E	E		625	625	615			17.53	51,506
	52		E	E	E	E		415	415	406	80		18	35,754
								312	286	249			13.3	27,443
							26	175	175	171			12.938	4,501
								156	156			30	18	6,757
				X (200)				200						
			X (600)					600						
	X (130)							130						
X (84)								84						

[Names of School, Hospitals used and distances of Hospitals from School]	Student Entry	Medicine		Surgery			Interchangeable	Gynaecological	Obstetric	Children		
		General	Chronic	General	Orthop. and Fracture	Other Special Surgery				Infant Welfare	Medical	Surgical
University of Glasgow (cont.) M. Newton Mearns Sanatorium (Children's) 7 miles M. Stobhill Hospital ... 4 miles M. Southern General Hospital 2 miles M. Western District Hospital 2 miles M. Eastern District Hospital 3 miles M. Millerston Sanatorium, Robroyston 4 1/2 miles M. Ruchill Fever Hospital ... 2 1/2 miles M. Belvidere Fever Hospital 3 1/2 miles M. Knightswood Fever Hospital 1 1/2 miles M. Motherwell Fever Hospital 1 1/2 miles M. Govan District Asylum ... 6 miles		X (516)		X (217)					X (106) X (65) X (43) X (32)			
UNIVERSITY OF ST. ANDREWS (Medical School, Dundee) P.V. Royal Infirmary ... 1/2 mile M. Maryfield General Hospital 2 miles M. Ashludie Sanatorium ... 5 miles M. King's Cross Infectious Diseases Hospital ... 2 miles M. West Green Mental Hospital 5 miles	55	96		138		4		20	36		40	30
		X (156)		X (60)					X (20)		X	X (50)

Ear, Nose and Throat	Special Subjects							Ordinary Beds			Private Beds		Length of stay per patient (in days) [Parent hospital only]	New out-patients, in 1938 [Parent hospital only]
	Eyes	Skin	Psychological Medicine	Tuberculosis	Veneral Diseases	Infectious Diseases	Miscellaneous	Total	Total available for Teaching	Daily average occupation	Available for Teaching	Non-Teaching		
				X (500)				500						
								1,738						
								1,180						
								307						
								328						
				X (568)				568						
					X (24)			920						
					X (24)			200						
						X (250)		250						
						X (250)		250						
			X (1,080)					1,080						
22	" 22	13	E	E		E		421	421	484			16	36,707
			X (20)					328	328	286				
				X (125)				125		123				
						X (250)		250		133				
			X (640)					640		624				

APPENDIX I

Examples from the estimates of staff used by the Committee in calculating the possible financial needs of medical schools in the future.

General Notes :—(1) The nature of the appointments is indicated as follows :—

- W.T. (M) ... Whole-time appointment on staff of the medical school.
 W.T. (C) ... Whole-time service within the teaching centre, although only a part-time member of the staff of the medical school.
 P.T. (C) ... Part-time teacher of medical school and part-time member of medical staff of the teaching centre.

(2) The estimates are considered reasonable for a school that admits approximately 100 students a year to both the pre-clinical and clinical parts of the course.

(3) As stated in the report a common pattern of staffing for all medical schools would be undesirable. There are bound to be considerable local variations. The estimates set out below are quoted merely to illustrate the scale of staffing which the Committee considers will have to be aimed at in future. Provision in the various departments not included among these examples should be of an order that will secure a proper balance.

(4) It has been assumed that there will be a centralization of various services and accommodation, such as animal houses, mechanical and carpentry workshops, photographic and art departments, as suggested in Appendix G, paragraphs 3-4, to the Report. The technical staff given in the examples below is *exclusive* of technical staff on such centralized services.

(5) The provision for secretary-typists is intended for both medical school and hospital work of the departments.

DIVISION OF PRE-CLINICAL STUDIES

DEPARTMENT OF ANATOMY

*Assumption :—*The department will be responsible for teaching histology and the morphological aspects of biology, as proposed in chapter 7 of the Report.

- 1 Professor ... W.T. (M) ... Head of the department.
 2 Readers or senior lecturers ... W.T. (M) ... Normally the two readers will be specialists in those branches of anatomy in which the professor is not a specialist; thus, if the professor is an embryologist, one of the readers might be a specialist in neurology and the other in the biological aspects of anatomy and possibly also in histology.

- 2 Lecturers ... W.T. (M)
 1 Assistant ... W.T. (M)

[It has been assumed that the above will devote approximately half-time to teaching and half-time to research.]

- 6-8 Demonstrators ... W.T. (C). Some may be W.T. (M). The number of demonstrators required will vary according to the amount of time which each person devotes to the department. The estimate of 6-8 is based on the assumption that, on average, each demonstrator will spend 4-5 half-days a week in the department of anatomy, spending the rest of his time in the clinical departments.
 1 Teacher of radiological anatomy. Probably W.T. (C) but part-time (i.e., 2-3 half-days a week) in anatomy department. Preferably this teacher should be on the diagnostic side of the radiology department of the parent teaching hospital.

Technical assistants [all W.T. (M)]

- 2 Grade A technical assistants. One, say, for dissecting room, etc., and the other for histology and embryology.
 2 Grade B technical assistants. One, say, for biological work and the other for photo-micrography.
 3 Grade C technical assistants.
 2 Laboratory apprentices
 Cleaners

[See General Note (4) above.]

Secretarial assistance

- 1 Secretary-typist ... W.T. (M)

PHYSIOLOGY (INCLUDING BIOCHEMISTRY, PHARMACOLOGY AND PSYCHOLOGY)

Assumptions :—(1) The department will normally be organized in 3 sub-departments, viz. :—(i) human physiology ; (ii) biochemistry (including biophysics) ; (iii) experimental physiology and pharmacology. [In some schools, experimental physiology and pharmacology may form separate sub-departments, while in other schools a sub-department of pharmacology might be associated with one of the clinical departments.]

(2) At the head of each sub-department will normally be a professor, reader, or senior lecturer.

(3) One of the professorial heads of the sub-departments will act also as the head of the whole department.

3-4 Heads of sub-departments. W.T..(M)... ... Each a professor or reader or senior lecturer.

4 Lecturers ... W.T. (M)... ... To act as deputies to heads of sub-departments.

8-10 Assistant lecturers, assistants and demonstrators. A few W.T. (M), the rest W.T. (C). Distributed among sub-departments as required. As in the department of anatomy most of these teachers may be part-time in the department of physiology and part-time in the clinical departments.

Technical assistants [all W.T. (M)]

1 Grade A technical assistant*... ... }
3-4 Grade B technical assistants ... } Distributed among the various sub-departments as required.
4-5 Technical assistants in training ... }
Cleaners

[See General Note (4) above.]

Secretarial assistance

Minimum of 3 Secretary-typists [W.T. (M)].

DIVISION OF PATHOLOGY

Assumptions :—(1) The division of pathology will normally be divided into 4 departments, viz. :—(i) morbid anatomy ; (ii) bacteriology ; (iii) chemical pathology ; (iv) clinical pathology. (See chapter 8.)

(2) At the head of each department will be a professor, reader or senior lecturer.

(3) The director of the division of pathology will be the departmental head most suited to administrative work.

(4) The various departments will be responsible for the pathological work of the parent teaching hospital and perhaps also of certain associated teaching hospitals.

4 Departmental heads ... W.T. (M)... ... Professors, readers or senior lecturers.

4 Lecturers ... W.T. (M)... ... One for each department. They will be persons of 4 or more years' experience in their subject.

4 Resident assistants ... W.T. (M)... ... One for each department. They will be persons who propose to make a career in pathology.

4 Demonstrators ... W.T. (M)... ... }
4 Demonstrators ... W.T. (C) ... } One whole-time and one part-time for each department. Some may be obtaining experience in pathological procedures before embarking on a career in clinical medicine or surgery.

In some places additional assistants may be required in one or more of the departments. Additional staff, such as post-graduate trainees in pathology (i.e., men who intend to become pathologists but are not yet fitted to be in charge of either routine work or teaching) and special research workers, may be distributed among the departments of the division as may be convenient. Pathologists working with special departments have not been included.

Technical assistants [W.T. (M)]*

	<i>Morbid Anatomy</i>	<i>Bacteriology</i>	<i>Chemical pathology</i>	<i>Clinical pathology</i>
Grade A technical assistant.	1	1	1	1
Grade B technical assistant.	4 (1 for post-mortems ; 1 for museum ; 1 for teaching ; 1 for research).	1 for media 1 for teaching 1 for research	1	5 (3 for hospital work ; 1 for teaching ; 1 for research).
Grade C technical assistant.	2	2	2	2
Boy in training ...	1	1	1	1
Cleaners ...	1	1	1	1

[See General Note (4) above.]

Secretarial assistance [W.T. (M)]

Secretary-typist... 2 (1 for post-mortems and museum). 1 1 1

* Certain schools and teaching hospitals provided technical assistance on this scale before the war.

DIVISION OF MEDICINE

DEPARTMENT OF GENERAL MEDICINE (INCLUDING NEUROLOGY)

Assumptions :—(1) For the purposes of teaching and research the department will have a whole-time professor of medicine as its academic head, and for teaching and research purposes will be organized on the lines described in chapter 9, paragraph 20.

(2) The department will have 250 beds.

(3) The professor of medicine will be the academic head of the division of medicine.

- | | | | |
|--|---|--------------|---|
| 1 Professor of medicine | W.T. (M)... | ... | Academic director of department and physician in teaching centre. |
| 2 Readers or senior lecturers. | W.T. (M)... | ... | One will be deputy academic director. Each will be a physician in teaching centre. |
| 8 Physicians and assistant physicians. | Most P.T. (C); but some of the junior assistant physicians may be W.T. (C). | | It has been assumed that these clinical teachers will normally devote half-time or more to the work of the teaching centre (including teaching and research). |
| 10 Assistants | ... | W.T. (C) ... | Includes grade now sometimes called Registrar. Four of the assistants should be resident. |
| 10 Pre-registration house-physicians. | W.T. (C) | | |

In some medical schools there may be in addition to the professor of medicine other whole or part-time professors in this department, e.g., a professor in neurology.

Technical assistants

- | | | | |
|---|-------------|-----|---|
| 5 Technical assistants of various grades. | W.T. (M)... | ... | To serve all departments of the division of medicine. |
|---|-------------|-----|---|

Secretarial assistance

- | | | | | |
|---------------------|-----|-------------|-----|---|
| 6 Secretary-typists | ... | W.T. (M)... | ... | To serve all departments of the division of medicine. |
|---------------------|-----|-------------|-----|---|

[With regard to other departments in the division of medicine see General Note (3) above.]

DIVISION OF SURGERY

DEPARTMENT OF GENERAL SURGERY

Assumptions :—(1) For purposes of teaching and research the department will be organized on the same lines as the department of general medicine and will have 250 beds.

(2) Surgical specialities are included except ear, nose and throat and ophthalmic departments.

- | | | | | |
|---------------------------------------|-----|---------------------------------|-----|--|
| 1 Professor of surgery | ... | W.T. (M)... | ... | Academic director of the department and a surgeon in the teaching centre. |
| 3 Readers or senior lecturers. | ... | W.T. (M)... | ... | Deputy academic directors of the department (one may be a reader in experimental surgery). |
| 8 Surgeons | ... | P.T. (C) ... | ... | Devoting half-time to the work of the teaching centre (including teaching and research). |
| 10 Assistants | ... | Some W.T. (C), others P.T. (C). | | Some will be resident. |
| 8-10 Pre-registration house-surgeons. | ... | W.T. (C) | | |

In some schools there may be, in addition to the professor of surgery, other whole or part-time professors in this department.

Technical assistants [W.T. (M)]

- | | | | |
|--|-----|--|---|
| 5 Technical assistants of various grades | ... | | To serve all departments of the division. |
|--|-----|--|---|

Secretarial assistance

- | | | | | |
|---------------------|-----|----------|-----|---|
| 6 Secretary-typists | ... | W.T. (M) | ... | To serve all departments of the division. |
|---------------------|-----|----------|-----|---|

[With regard to other departments of the division of surgery see General Note (3) above.]

DIVISION OF OBSTETRICS AND GYNAECOLOGY

Assumptions :—(1) For the purposes of teaching and research the division will have a whole-time professor of obstetrics and gynaecology as its academic head.

(2) The division will have 100 obstetrical and 50 gynaecological beds.

(3) The staff will be responsible for some domiciliary midwifery work, and for the teaching of both obstetrics and gynaecology.

- | | | | | | |
|-------------------------------------|-----|-----|--------------|-----|--|
| 1 Professor | ... | ... | W.T. (M)... | ... | Academic director. |
| 1 Reader or senior lecturer. | ... | ... | W.T. (M)... | ... | Deputy academic director. |
| 2 Obstetricians and gynaecologists. | ... | ... | P.T. (C) ... | ... | Will be senior clinical teachers. |
| 6 Assistants | ... | ... | W.T. (C) ... | ... | This number is desirable if the division is to train future specialists. |
| 7 House-surgeons | ... | ... | W.T. (C) | | |

[One of the senior staff and one of the assistant physicians on the staff of the department of child health will be associated with the division of obstetrics and gynaecology in respect of the care and management of new-born infants.]

Technical assistants [all W.T. (M)]

3 Technical assistants of various grades

Secretarial assistance

3 Secretary-typists ... W.T. (M)

APPENDIX J.

Extract from the Medical Act 1886 relating to colonial and foreign practitioners.

11. Registration of Colonial Practitioner with recognised Diploma.—*On and after the prescribed day** where a person shows to the satisfaction of the registrar of the General Council that he holds some recognised colonial medical diploma, or diplomas (as hereinafter defined) granted to him in a British possession to which this Act applies, and that he is of good character, and that he is by law entitled to practise medicine, surgery and midwifery in such British possession, he shall, on application to the said registrar, and on payment of such fee not exceeding five pounds as the General Council may from time to time determine, be entitled, without examination in the United Kingdom, to be registered as a colonial practitioner in the medical register;

Provided that he proves to the satisfaction of the registrar any of the following circumstances:—

(1) That the said diploma or diplomas was or were granted to him at a time when he was not domiciled in the United Kingdom, or in the course of a period of not less than five years during the whole of which he resided out of the United Kingdom; or

(2) That he was practising medicine or surgery or a branch of medicine or surgery in the United Kingdom on the *said* prescribed day, and that he has continuously practised the same either in the United Kingdom or elsewhere for a period of not less than ten years immediately preceding the *said* prescribed day.

12. Registration of Foreign Practitioner with recognised Diploma.—*On and after the said prescribed day** where a person shows to the satisfaction of the registrar of the General Council that he holds some recognised foreign medical diploma or diplomas (as hereinafter defined) granted in a foreign country to which this Act applies, and that he is of good character, and that he is by law entitled to practise medicine, surgery and midwifery in such foreign country, he shall, on application to the said registrar, and on payment of such fee not exceeding five pounds as the General Council may from time to time determine, be entitled, without examination in the United Kingdom, to be registered as a foreign practitioner in the medical register;

Provided that he proves to the satisfaction of the registrar any of the following circumstances:—

(1) That he is not a British subject; or

(2) That, being a British subject, the said diploma or diplomas was or were granted to him at a time when he was not domiciled in the United Kingdom, or in the course of a period of not less than five years during the whole of which he resided out of the United Kingdom; or

(3) That, being a British subject, he was practising medicine or surgery, or a branch of medicine or surgery, in the United Kingdom on the *said* prescribed day, and that he has continuously practised the same in the United Kingdom or elsewhere for a period of not less than ten years immediately preceding the *said* prescribed day.

* The words in italics in this section were repealed by the Statute Law Revision Act, 1898.

APPENDIX K
Population of Greater London

Area	Census 1931	Registrar General's Mid-Year Estimate				Percentage inc. (+) or dec. (-) in 1938 over 1931	Remarks
		1935	1936	1937	1938		
COUNTY OF LONDON							
(a) Inner Area ...	963,037	891,270	871,950	853,070	841,380	-12.6	Comprises:—City of London, Westminster, Holborn, Finsbury, Shoreditch, Bethnal Green, Stepney, Bermondsey, Southwark, Metropolitan Borough Councils. Comprises remaining Metropolitan Borough Councils in County of London.
(b) Outer Area ...	3,433,966	3,293,930	3,269,150	3,241,430	3,221,420	-6.2	
TOTAL (i) ...	4,397,003	4,185,200	4,141,100	4,094,500	4,062,800	-7.6	
GREATER LONDON OUTSIDE COUNTY BOUNDARY.							
(a) Inner Area ...	2,518,760	2,656,950	2,690,810	2,708,980	2,720,070	+7.9	Comprises area within 10 miles radius outside the County of London. Do. between 10-15 miles.
(b) Outer Area ...	1,229,910	1,648,056	1,759,542	1,868,248	1,934,383	+57.3	
TOTAL (ii) ...	3,748,670	4,305,006	4,450,352	4,577,228	4,654,453	+24.2	
TOTALS (i) and (ii)	8,145,673	8,490,206	8,591,452	8,671,728	8,717,253	+7.0	

APPENDIX L.

Possible associated teaching hospitals for medical schools of the University of London.

1. As stated in chapter 6, paragraph 40, the following suggestions of possible associated teaching hospitals for various medical schools of the University of London are submitted by way of illustrating how the clinical teaching resources of the medical schools may be extended. It is hoped that these illustrations may facilitate the negotiations between the bodies concerned. The associations suggested are in addition to those that will be required for training in infectious and mental diseases. Schools which we have suggested should be transferred to the outer parts of London have not been included.

2. **Guy's Hospital Medical School.**—The average entry to this school is about 100 students a year. The number of beds to which, in our view, access is necessary for the training of this number of students is 950 to 1,000 (see chapter 3, paragraph 27). The number of beds at Guy's Hospital in 1938 was 618 (exclusive of beds for private patients). There were not enough beds in any of the main categories. We cannot forecast at the present time whether an enlargement of Guy's Hospital will ultimately be warranted by the needs of the area; but the medical school could attain adequacy of clinical teaching facilities by using St. Olave's (L.C.C.) Hospital (which is about 2 miles away, and before the war had 688 beds), and perhaps also certain small hospitals in the neighbourhood, as associated teaching hospitals.

3. **King's College Hospital Medical School.**—King's College Hospital is well situated from the point of view of the hospital service of London. There are two London County Council general hospitals in the neighbourhood, St. Giles's Hospital (total number of beds pre-war 810), which is a distance of a quarter of a mile, and Dulwich Hospital (pre-war bed complement 723), which is a mile away from the medical school. St. Giles's Hospital has suffered serious air-raid damage and it would be advantageous from the teaching point of view if, instead of this hospital being rebuilt to its pre-war size on its present site, King's College Hospital could be enlarged.

4. Whether or not King's College Hospital is so enlarged, the medical school, by using St. Giles's Hospital or Dulwich Hospital, or both, as associated teaching hospitals, should be able to cater easily for an entry of up to 100 students a year. The pre-war entry was half this number.

5. It is assumed that the medical school will continue its connection with King's College for the provision of pre-clinical courses. The ability of the latter to accept more students from the medical school for these courses will depend upon Charing Cross Hospital and St. George's Hospital, both of which at present have similar connections with the College, becoming complete medical schools after transfer from their present sites.

6. **London Hospital Medical College.**—London Hospital, on the basis of a pre-war annual entry to the clinical part of the course of about 75 students, had, in total, more than sufficient beds, on the scale adopted by us, for the clinical training of this number of students. In certain categories, however, especially obstetrics, the number of beds fell short of the desired provision. An association with, say, Mile End (L.C.C.) Hospital, which is about 1 mile distant, would remedy this deficiency and might make possible, if desired, the increasing of the entry to the college to about 100 students a year. The bed complement of Mile End Hospital before the war was 466, including 58 obstetrical beds. Alternatively, or in addition, some of the smaller voluntary hospitals in the vicinity might be brought into the college's group of teaching hospitals.

7. **Middlesex Hospital Medical School.**—A possible associated teaching hospital would be one of the Highgate group of London County Council general hospitals.

8. **St. Bartholomew's Hospital Medical College.**—It is assumed that St. Bartholomew's Hospital Medical College will restrict its entry to about 100 students annually to the clinical period. Beds available in St. Bartholomew's Hospital fall short by something like 200 of the estimated requirements for this number of students. Apart from the possibility of the hospital needs of the district justifying an enlargement of St. Bartholomew's Hospital, either St. Leonard's (L.C.C.) Hospital or Bethnal Green (L.C.C.) Hospital, might be suitable as an associated teaching hospital. The choice may be determined by decisions regarding the future status of these hospitals.

9. **St. Mary's Hospital Medical School.**—The pre-war entry of students to St. Mary's Hospital Medical School for clinical studies was in the neighbourhood of 70 per annum. Additional clinical teaching facilities are available in the vicinity of the school which

would not only provide more adequately for the pre-war number of students, but would permit the school to expand to a more economical size by increasing its annual entry to nearer 10. The existing association with Paddington (L.C.C.) Hospital (which is about 1 mile away and before the war had 658 beds) could no doubt be extended.

10. **St. Thomas's Hospital Medical School.**—St. Thomas's Hospital has been considerably damaged in air raids and will require extensive rebuilding. The hospital authorities wish to use the opportunity thus offered to enlarge the hospital, increasing its bed capacity from 642 to between 800 and 1,000 beds. Such an enlargement, in view of the hospital's proximity to other large general hospitals, and the probability of a diminishing population in the area, is likely to be justified only if it is offset by a fairly substantial reduction in the number of acute cases admitted to Lambeth (L.C.C.) Hospital, which is less than a mile away and had a pre-war bed complement of 1,160. Pending the enlargement of St. Thomas's Hospital, and even thereafter, it would be desirable for Lambeth Hospital to be an associated teaching hospital of the medical school. For instance, the distribution of teaching work might with advantage involve the centring of the teaching in obstetrics and gynaecology on the large and modern maternity department of Lambeth Hospital.

11. **Westminster Hospital Medical School.**—St. Stephen's (L.C.C.) Hospital, which is about 3 miles away and had a bed complement of 746 before the war, might form part of the teaching centre based on this school. Alternatively, or in addition, certain of the small special hospitals which are within about half a mile of the school might be included. So far as clinical teaching facilities are concerned, these associations should enable the school to increase to a more economical size.

12. **University College Hospital Medical School.**—The facilities for clinical teaching in University College Hospital might be supplemented by using one or more of the voluntary hospitals which are in the immediate neighbourhood of the school. Another possible association might be with a general hospital in the Hampstead or Highgate area.

APPENDIX M

Medical Schools of the University of London 1938-1939

Details of the staff who were engaged in teaching the pre-medical and pre-clinical subjects, and of the number of medical students who attended courses of instruction in these subjects at the medical schools.

CHEMISTRY

Institution	Staff							Number of students
	Prof. (FT)	Senior Lect. (FT)	Lect. (FT)	Asst. Lect.		Demnstr.		
				(FT)	(PT)	(FT)	(PT)	
Guy's H.M.S. ...	I	—	—	I	—	2	I	90
King's Coll. (a) ...	I	—	I	I	—	2	—	63
L.S.M. Women ...	—	—	I	—	I	2	I	57
Middx. H.M.S. ...	I	—	—	I	—	—	—	37
St. Barts H.M.C. (b)	I	—	I	—	—	2	—	78 (c)
St. Mary's H.M.S.	—	—	I	—	—	—	I (d)	50
St. Thos. H.M.S.	I	—	—	—	—	2	—	?
Univ. Coll. (e) ...	—	I	—	—	—	—	4	70

(a) These teachers of the department took part in teaching medical students and taught other classes of students as well.

(b) The staff also taught biochemistry.

(c) Average for the 3 terms of the academic year.

(d) Was also a demonstrator in physics. In addition there was 1 student assistant demonstrator.

(e) These teachers were responsible for a "Biological Intermediate" class of about 100 students of whom 70 were medical students.

PHYSICS

Institution	Staff						Number of students
	Prof. (FT)	Lecturer		Asst. Lect. (FT)	Demstr.		
		(FT)	(PT)		(FT)	(PT)	
Guy's H.M.S.	I	—	—	I	I	—	87
King's Coll. (a)	I	I	—	I	2	—	61
L.S.M. Women	—	I	—	I	I	I	57
Middx. H.M.S.	I	—	—	I	—	—	34
St. Barts H.M.C.	I	—	—	—	2	—	78(b)
St. Mary's H.M.S.	—	—	I	—	—	I(c)	52
St. Thos. H.M.S.	—	—	I	—	I	—	?
Univ. Coll. (d)	—	I	—	I	—	3	70

(a) Teachers of the department who took part in teaching medical students but who taught other classes of students as well.

(b) Average for the 3 terms of the academic year.

(c) Was also demonstrator in chemistry. In addition there was 1 student assistant demonstrator.

(d) These teachers were responsible for a " Biological Intermediate " class of about 100 students of whom 70 were medical students.

BIOLOGY

Institution	Staff							No. of students in 1938-39
	Reader	Lecturer		Asst. Lect.		Demonstr.		
	(FT)	(FT)	(PT)	(FT)	(PT)	(FT)	(PT)	
Guy's H.M.S. ...	—	I	—	—	—	2	I	99
L.S.M. Women ...	—	I	—	—	I	—	2	57
Middx. H.M.S. ...	I	—	—	I	—	—	—	34
St. Barts H.M.C.	I	—	—	—	—	I(a)	2(a)	78(b)
St. Mary's H.M.S.	—	—	I	—	—	—	I	54
St. Thos. H.M.S.	—	I	—	—	—	I	—	?

(a) Also student demonstrators as required.

(b) Average for 3 terms of the academic year.

At King's College and University College, biology was taught as botany and zoology. The teaching staffs concerned in instructing medical students in these subjects are set out below; these teachers taught other classes of students as well.

Institution	Staff					No. of students
	Professor	Lecturer	Assistant Lecturer	Demonstrator		
	(FT)	(FT)	(FT)	(FT)	(PT)	
King's College ...	1	2	1	1	—	83
University College (a)	1	3	1	1	—	70
		ZOOLOGY				
King's College ...	1	1	1	2	—	83
University College (a)	2	3	2	—	3	70

(a) The staff taught non-medical as well as medical students.

At the colleges and schools that arranged courses of instruction in the pre-clinical subjects the teaching staffs who were engaged in teaching anatomy, physiology, and pharmacology, are enumerated in the following tables :—

ANATOMY

Institution	Staff											
	Prof.		Reader		Lect.		Asst. Lect.		Demstr.		Student Demstr.	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Guy's H.M.S. ...	—	2(a)	1	—	—	—	—	—	1	2	—	—
King's College ...	2	—	—	—	—	1	—	—	3	6	—	—
London H.M.C. ...	1	—	1	—	1(b)	1	—	—	1	2(e)	—	—
L.S.M. for Women ...	1	—	—	—	—	—	1	—	—	4	—	—
Middlesex H.M.S. ...	1	—	—	—	—	—	3(c)	—	—	—	—	—
St. Barts H.M.C. ...	1	—	—	—	—	—	—	—	1(f)	4(g)	As reqd.	—
St. Mary's H.M.S. ...	1	—	—	—	—	—	1	—	—	1	2	—
St. Thos. H.M.S. ...	1	—	—	—	1	—	—	—	1	2	—	—
Univ. Coll. (d) ...	1	—	3	—	3	1	—	—	2	3	Artist.	—

- (a) One professor in histology.
 (b) Lecturer in histology.
 (c) Assistant lecturer and demonstrator.
 (d) Anatomy and embryology.
 (e) One demonstrator in histology.
 (f) Senior demonstrators.
 (g) One demonstrator in radiological anatomy.

PHYSIOLOGY

Institution	Staff													
	Prof.		Reader		Sen. Lect.		Lect.		Asst. Lect.		Demstr.		Student Demstr.	
	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
Guy's H.M.S. ...	—	—	2(a)	—	—	—	1(b)	—	—	—	—	3	—	—
King's Coll. (c) ...	1	—	1	—	1	—	1	5(d)	—	—	3	—	—	—
London H.M.C. ...	1	—	1	—	—	—	—	1	—	—	1	—	—	—
L.S.M. for Women ...	1	—	1	—	—	—	—	—	1	1	1	—	—	—
Mddx. H.M.S. ...	1	—	—	—	—	—	—	2	—	—	—	—	—	—
St. Barts H.M.C. ...	1	—	—	—	—	—	—	—	—	2(c)	3(f)	As reqd.	—	—
St. Mary's H.M.S. ...	1	—	—	—	—	—	—	1	—	—	1(g)	—	—	—
St. Thos. H.M.S. ...	1	—	—	—	—	—	1	—	—	—	1	—	—	—
Univ. Coll. (h) ...	2	—	2	—	—	—	4	—	2	—	5	—	3	—

- (a) One reader in biochemistry.
 (b) Lecturer in physiology and pharmacology.
 (c) Department of physiology, biochemistry and pharmacology.
 (d) Hon. lecturers.
 (e) Senior demonstrators.
 (f) One demonstrator in physiology and pharmacology.
 (g) Halley Stewart scholar assistant, takes course in therapeutics.
 (h) Department of physiology and biochemistry (excluding dept. of biophysics).

PHARMACOLOGY

Institution	Staff											
	Prof.		Reader		Sen. Lect.		Lect.		Demstr.		Student Demstr.	
	F.	P.	F.	P.	F.	P.	F.	P.	F.	P.	F.	P.
Guy's H.M.S. (a) ...	—	—	—	—	—	—	—	1	—	—	—	—
King's Coll. (b) ...	—	—	—	—	—	—	—	—	—	—	—	—
London H.M.C. ...	—	—	—	—	—	—	1	—	—	1	—	—
L.M.S. for Women ...	—	—	1	—	—	—	—	—	—	1	—	—
Middlesex H.M.S. ...	—	—	—	—	—	—	1	—	—	—	—	—
St. Barts H.M.C. ...	—	—	—	—	—	—	—	3	1(c)	1	—	—
St. Mary's H.M.S. ...	—	—	—	—	—	—	—	1	—	—	—	1
St. Thos. H.M.S. ...	—	—	—	—	—	—	—	2(d)	—	—	—	—
Univ. College ...	1	—	1	—	—	—	—	—	—	2(e)	—	—

(a) One F.T. lecturer in physiology and pharmacology in physiology dept.

(b) Included in physiological table.

(c) Also demonstrator in physiology.

(d) One lecturer in pharmacology and therapeutics and one lecturer in pharmacy and materia medica.

(e) Also 4 P.T. demonstrators who assisted in practical classes only.

APPENDIX N.

Extracts from the Memorandum of University College Hospital Medical School regarding improved theoretical instruction of medical students..

"It is our belief that medicine can no longer be taught entirely as a practical art. Medicine has now passed from a stage of observation and empirical therapy and reached one in which the practitioner is becoming increasingly dependent upon the application of theory to practice. Much existing medical knowledge has not as yet yielded to generalization, and the practitioner must still rely on the memorising of empirical facts. But if our medical schools are to produce practitioners capable of applying modern knowledge, our present system of training must be so adjusted as to display both theoretical and practical aspects of medicine. It is essential that in the training of practitioners provision be made for teaching the theory of medicine. This requires, not only that teachers shall wherever possible teach vocational medicine by applying underlying principles, but also that they shall plan courses to display the theoretical basis of clinical medicine.

We consider that there is no fundamental distinction between theoretical and practical medicine. Nevertheless, for convenience of discussion and administration a distinction may be drawn between theoretical and vocational teaching.

Vocational training.

It is universally recognized that sound education in Medicine must include a training in accurate observation, cultivation of technical skill in eliciting manifestations of disease and in its treatment, a general understanding of the structure and functions of the normal body, a sound factual knowledge of disease and its processes. It is in these directions that the weight of medical education is at present thrown. Valuable as these disciplines prove, they are nevertheless far from fulfilling fundamental principles of education, or of fitting the medical student for his life work. Because far less, in fact little, attention has been given to theoretical training in the past, the need for it will be spoken of and illustrated at greater length.

Theoretical (basic) training.*

It is fundamental in medical, as in all other forms of education, that the student should acquire sound habits of learning. He should become acquainted with the history of discovery, coming to understand how knowledge has been and is being

* There is divergence of views as to the best term to use; it does not matter provided that the correct idea is gathered from the context. See particularly under *Theoretical* on page 302.

won; he should be taught to recognise sound sources of information, past and present, he should be taught to study steadily and intelligently; that he may come to possess that great acquisition of the student, namely, a fondness, or more exceptionally a passion, for understanding, and through this achieve conscious independence of thought and judgment:

Understanding derives from an intelligent and discriminating study of the past and present experiences; once attained it unbolts the doors to an understanding of further experiences. Discrimination of true from false relies upon a practised faculty of criticism, and upon a firm grasp of the rules of evidence. Understanding is the basis of progress and the vital flame in education; discrimination is the only sure defence against false doctrine and unsound practice.

When studying, the ancillary sciences, and particularly physiology, a serious attempt to imbue such culture has long been made, but it is vitally important to the development of the student's mind that such culture should not cease, but that it should be continued and that it should be illustrated especially within the field in which he is to work for the rest of his life.

It may be permissible further to stress the chief gap in medical education of to-day, namely, academic culture, by illustration.

Diagnosis.—It is of high importance that students of Medicine should learn more clearly than they do to distinguish between factual knowledge and conceptions. Diagnosis is a system of more or less accurate guessing, in which the end-point achieved is a name. These names applied to disease come to assume the importance of specific entities, whereas they are for the most part no more than insecure and therefore, temporary conceptions. That this is so is manifest from the fact that our nomenclature of disease is a frequent source of disagreement and is constantly undergoing change. Major discoveries nearly always, and minor discoveries often, lead to immediate change of terms or of the meaning of terms. It is patent that nomenclature is insecure, definition still almost absent, and that diseases as we now isolate and name them, are in large part not disorders *sui generis*. Students of medicine should be brought to realise that these things are so. This example suffices to illustrate the high importance of an understanding of phenomena, an analysis of disturbed functions, as opposed to a purely nosographical approach. For, just in the measure that the conceptions implied in nomenclature are misinterpreted as factual, subsequent reorientation of ideas is impeded.

The fruits of studying individual manifestations of disease have far greater permanence than have the descriptions of associated symptoms under separate names. 'Diseases' associate themselves with the era, with the climate or race, with special contacts with fellow men, with racial experience or with particular industrial poisons. But the manifestations of disease are perpetual; this their constancy is due to their being inevitable reactions of the body. Thus a student who acquires minute knowledge of a given 'disease,' will find this knowledge of relatively little service when this disease is no longer encountered or changes its form; but the student who fully understands a reaction of the body (a symptom) has knowledge which will always remain in frequent application. The first student can deal with familiar types; the second is armed against the unfamiliar and the new. And here it is to be reiterated that the student goes forth from his school to practise in a world of constantly changing ideas and nomenclature, and to meet in patients many phenomena new to him. He must be so trained that his mind readily accommodates itself to change, and to the unfamiliar. Dogmatical teaching moulds his mind to fit one groove, in which it will travel smoothly so long as the groove retains its shape; such teaching not only stereotypes, imposing a sense of completeness and finality, where knowledge is far from full or universally trustworthy, but leads to acceptance of views purely upon authoritative lines.

What has been said applies to recognition and understanding of conditions of disease, and it is here contended that, important as diagnosis undoubtedly is, and important as it is that students should obtain a wide experience in diagnosis, yet present day medical education lays a too unbalanced emphasis upon diagnosis as an end-point. The result is the too high appraisal of memory. A measure of rivalry in diagnosis among men training for practice has much to recommend it, but under the present régime it becomes predominant and tends to exclude the more intellectual activities possible in hospital life. This, therefore, is a plea for the greater encouragement of the analytical, in contrast to the descriptive, method of approach, and for a wider use of inductive and deductive processes of thought.

Treatment.—This century has seen considerable changes in the use of remedial measures. Many very potent methods of treating or guarding against disease have been introduced, progress continues to be relatively rapid. Nevertheless there is no

branch of medicine in which prejudice so readily takes command, supported by the voices of authority and of the drug vendor. A result, strongly desired by both patient and doctor, comes very naturally to be acclaimed prematurely. When a remedy quickly and often produces a conspicuously beneficial effect, safeguards are less needed; but where the effects of treatment are less obvious, judgment of the result is very apt to be fallacious. It should be possible to show the results of treatment by summoning groups of patients treated in the past, or to present records of such. A follow-up department could be made to contribute much to this end.

It is of high importance that every medical student should take part in chosen examples of carefully controlled treatment, where two regimes, or two remedies, are pitted against each other, and the result meticulously recorded and judged without prejudice. Exceedingly few students, however, have witnessed such observations; very few are even on record.

Every student should be convinced, through both precept and example, of the fallacy of the '*post ergo propter*' type of argument. It is quite unreasonable that students should leave their period of training, ready to believe—as most of them come to believe—that any improvement witnessed in a patient under their care is necessarily the result of remedies given. Such men become too easily the dupes of those who trade in proprietary remedies, or of their own too quickly gathering confidence. If after a remedy is prescribed, one patient improves and another becomes worse, there is on this evidence no more reason to ascribe the first than the second change to the remedy; but exceedingly few qualified men know this. The manner in which the practising profession are lightheartedly and constantly passing from this—first vaunted and then discarded—remedy to that, should not be regarded any longer with equanimity.

Nothing but reformed education on academic lines will correct the fantastic beliefs in many forms of present day therapy.

The two approaches in teaching

Vocational and theoretical teaching are activities which, though both concerned with disease in patients, have distinct points of view, different methods of approach, and different immediate goals. It should be recognised that they are equally important, both being essential, and that they are in no sense antagonistic; they are in fact complementary. There is in each of these two main directions ample scope for a man's intelligence and energy; in fact it is very difficult to-day for the two activities to be carried on adequately by one and the same person, except in special or restricted spheres; that is so not only because of the great extent of each field, but also because when successfully presented they demand certain differences of outlook and of method. At the same time they should not be confined within rigid boundaries; the vocational teacher should be a man of wide culture, with in the future an increasingly scientific outlook, and it is to be hoped often engaging in research; the outlook of the theoretical teacher will lack breadth and usefulness unless there are daily experiences of practical problems. The proper relation between the two should be one encouraging very frequent contacts with a view to mutual assistance and inspiration.

Vocational.—Vocational teaching should maintain itself upon its present basis, concerning itself primarily with diagnosis, prognosis, and treatment. Its keynote is *concentration upon the individual*, his health, work, and conditions of living. This teaching should be done mainly at small bedside or out-patient classes, and it should be undertaken by practising doctors, whose main concern is the care of sick people. Teachers of vocational medicine should not be rigid specialists; all should possess a sound knowledge of general medicine, and assist in its teaching.

The value of the principle underlying the apprenticeship system is universally recognised; it is that upon which the success of the student appointment relies; the student learns his practice under the direct guidance of a master of practice. This work should be associated most closely with relevant work in clinical laboratory, other departments of special clinical investigation (X-ray, etc.), and with postmortem examinations.

It is imperative that a halt should be called to the steady increase of factual knowledge, which students are expected to encompass, and essential that, by considered selection, there should be an actual and substantial reduction in the quantity that must be learned. When we glance through the endless pages of this and that closely printed textbook of Medicine or Surgery, often no longer seemingly within the capacity of one man to write, but comprising in summary form the learning of many; when we remember how difficult it has become to find unoccupied hours in the time-table of students in the first years of the final course; when we consider the natural tendency,

of many specialist teachers to display or even to emphasise in their teaching the particular and unusual knowledge they happen to possess in their own branches of work; then we must perforce recognise the unreasonable task set to the student of to-day. The present system seems chiefly intent on imposing a colossal burden on memory; it has in fact the result of largely excluding other mental processes. This reduction of factual knowledge taught, widely regarded as already necessary, becomes all the more imperative if theoretical teaching is to be given its proper place in the curriculum.

The steady aim should be to send the student forth possessed of sound knowledge of the common diseases and their management, with a clear but not overcrowded mind.

Vocational teaching will by no means avoid a rationalistic outlook, or simplification by generalisation, but will allow such to develop as Medicine progresses.

- **Theoretical.**—The key-note of such teaching should be *concentration not on the individual but upon disease*. It should include theories of disease, both hereditary and acquired. It should clarify in students' minds what is meant by disease, and concern itself intimately with the cause of disease. It should use the history of medicine from the special standpoint of studying methods of discovery, relating step by step the manner in which important discoveries, and especially recent discoveries, have been made; this not only for its general educational value but as a stimulus to new endeavour. It should keep close contact with work in the ancillary sciences and especially with physiology. It should explore the meaning of manifestations of disease, seeking the reason why the same manifestation occurs in different sets of circumstances, and analysing such manifestations in terms of disturbed function. Thus the teacher should be strongly backed by direct and indirect experiences of research.

In respect of diagnosis, prognosis, and treatment, this teaching should concern itself mainly with principles, with evidence and criticism on broad lines, and with selected illustration only.

This work should be a primary responsibility of the full-time professional staff, the professors and their senior assistants, who alone will have the leisure to devote themselves adequately to the relevant studies; it should be their duty to prosecute and encourage original work, and their particular task to simplify and bring order to the mass of knowledge by establishing general rules and principles. But any idea that practical teaching should refrain in its teaching from generalisations and simplifications is, let it be reiterated, to be avoided; rationalisation is essential to all forms of teaching in that it is a powerful aid to memory and to thought. The essential difference between the two types of teaching here outlined is more in the ground covered than in processes of thought.

In brief, between them the two kinds of teaching should aim at sending the student forth with a well-trained mind, familiar with and critical of sources of information, possessed of a sound knowledge and experience of all common diseases, and of disease and manifestation of disease—whether common or rare—that is clearly understood. Thus a substantial foundation will be laid upon which, by building as he has been taught, his mind can become well stocked. It is altogether too burdensome to the student and to his teachers, it is also quite unnecessary, to attempt to cover the whole field of present-day knowledge of disease and its management; to attempt it defeats the purpose of sound education by overcrowding time and mind, robbing the student of all chance of contemplation and by default rendering the basis of his beliefs unsound . . .

“ The extent and target of theoretical teaching.

The introduction of more theoretical teaching is required for two practical purposes, namely, to stimulate progressive work, and to promote more thoughtful practice. To bring about the necessary reforms, these two purposes, separate but inter-related, must both be held in mind. If the research worker and teacher, and the practitioner, are both to be trained within the walls of one institution—and this seems inevitable—then adequate provision must be made to satisfy both.

We may ask as a preliminary how the mass of students will be influenced in hospital work by the theoretical teaching proposed. It is generally agreed, that a small percentage will be influenced and benefited profoundly and that from this group will come those who proceed to an academic career.* That the outlook of the latter must sooner or later diverge from that of medical students in general is clear. In many

* It is not intended to be inferred that all will so proceed.

instances, students with academic tendencies will have spent, and very profitably, extra time in physiology or biochemistry. The consequent divergence of thought will have already begun before they reach hospital.

From the time that men of this more thoughtful type are recognised they should be provided by the professoriate with special facilities for maintaining contact with scientific work. Throughout the whole of their final work and subsequently they should never be removed from the influence of academic atmosphere. The training of these men quite clearly demands permanent scientific contacts and finally a full scientific discipline and collaboration.

We may proceed to consider the extent to which theory should be pressed into the training of the average medical student. Very many, perhaps most, will benefit materially from theoretical teaching additional to what they have to-day—and here it is to be remembered that some is already provided by thoughtful physicians and surgeons and much by pathology. The introduction of more theoretical training into the final course is justified by the profound effect it will have on a percentage of men, and the benefits derived from leavening the whole. But it must be done circumspectly or its effect may come into conflict with sound practice, and may adversely affect men whose main virtue, if they are to become doctors, will be that they are practical-minded men.

While understanding will interest and stimulate many, it is false to imagine that diagnosis can be carried out now, or will be carried out in the future, chiefly by analysis of disturbed functions, or that therapeutics can be based chiefly on arguments from fundamental principles. The basis upon which *as doctors* we give a remedy is, and must remain, that experience has proved the value of the remedy. Whenever this rule is departed from, we are experimenting; and experimentation is unsafe in the hands of any men but those highly trained and possessed of an unusually high sense of responsibility. Thus attempts to turn 40,000 practitioners, or a large proportion of them, into as many doctors who habitually diagnose or treat upon the basis of independent thought, would be folly. Public safety requires, and public opinion rightly insists upon, a close adherence by the generality of doctors to what at the time are regarded as the established rules of an art.

A principle of reform therefore seems to be to give all students experience in both theoretical and vocational education, running these two side by side, so that while all may enjoy the two-fold opportunity different minds may make different and appropriate choices.

Theoretical education will have perhaps its chief effect in forming a strong body of leaders of the profession who are trained to discriminate in what they teach and advise.

The principle here emphasised has the advantage that it can be readily grafted on to the present system, that it will be fluid and that it will be easy to adjust subsequently as future experience may dictate.

The period of theoretical teaching.

The most receptive period for such teaching is in the earlier months of the final course. Some concentration of such teaching in this period therefore seems desirable. This is the important period of transition, in which students under the present regime are most apt to be strained.

As a principle the transition from physiology to medicine should be made to take place smoothly and easily and not abruptly and roughly as at present; all students should be carried from one to the other by a continuity of ideas. A sudden change to completely new facts and methods is disturbing and suggests, and often provokes, an abandonment of what has gone before. This transition can be helped by change both in the final and in the intermediate courses. In the training of medical students physiological teaching should pivot around human physiology—it should by no means exclude animal physiology—and it should thus pivot especially in the later parts of the physiological course. In this phase students should learn how to investigate the normal functions of the human body. Thus they would be freshly and fully prepared to understand corresponding observations upon disturbed function. This work of understanding disturbed function is the work of *applied* physiology, which becomes the natural introduction to clinical studies.

A long initial period of concentrated teaching of this kind is impracticable, since it demands the use of a select group of patients, most carefully chosen to illustrate applied physiology; the conditions of disease suited to such demonstrations are not numerous, unless we include a number which are comparatively rare and not at our beck and call. Doubtless the suitable types will increase with time, but at present the limitation of their number is such that the arrangement of anything

approaching systematic classes would impose an impossible strain upon the teacher. It is to be remembered that any patient upon whom any reactions are to be demonstrated must be thoroughly known to the teacher, and every reaction to be demonstrated must have been thoroughly tested beforehand. It will probably be necessary, while making such demonstrations as frequent as possible in the early months, to introduce simultaneously and to an increasing extent more purely vocational teaching.

It seems important that theoretical teaching in medicine—which as should be noted is of a much wider scope than applied physiology—should not be confined to the first months but should be diffused throughout the whole of the final course. Thus at every stage of a student's career this type of teaching should be available to him in the form of special lectures and demonstrations and, being in all the later stages admixed with vocational work, should form a leaven. The initial lectures and demonstrations in applied physiology should be compulsory, but the later teaching might be largely optional, so that those who are academically inclined would seize the opportunity, while those with a more immediately practical outlook might employ themselves more actively in other ways.

The principle emerging appears to be that theoretical teaching (as above) should be compulsory to all students early in their final work, and that any student so desiring should be able to continue using this educational opportunity throughout the whole of his final work."

APPENDIX O.

Notes on the objects of the British Postgraduate Medical School, its administrative arrangements and, in broad outline, the main provisions of the agreement between the Governing Body of the School and the London County Council.

Objects.—The objects of the school, as stated in its Royal Charter, which was granted in July, 1931, are as follows:—

... To provide opportunity for the advancement of knowledge of medicine, surgery, obstetrics and the allied sciences, and to promote the investigation of diseases and their treatment by arranging lectures and demonstrations or otherwise, and to publish, or assist the publication of, such books, pamphlets, journals and information as may be calculated to advance or assist the purposes of the School;

To arrange for co-ordination with other authorities at present providing post-graduate or other medical or scientific education in London;

To provide, or arrange for the provision of, residential facilities in London for students of the School. . . .

Government.—The Governing Body of the School consists of fourteen members appointed as follows in addition to the Chairman for the time being of the School Council:

One appointed by the Secretary of State for the Dominions.

One appointed by the Secretary of State for India.

One appointed by the Secretary of State for the Colonies.

Two appointed by the Ministry of Health.

Two appointed by the London County Council.

Two appointed by the Senate of the University of London.

One appointed by the Royal College of Physicians.

One appointed by the Royal College of Surgeons.

One appointed by the Society of Apothecaries.

One appointed by the Royal Society of Medicine.

One appointed by the British Medical Association.

In addition 5 members may be co-opted.

The Dean of the School is Secretary of the Governing Body.

The teaching staff are represented by the Chairman of the School Council. By invitation two of the professors attend meetings of the governing body. The governing body is required under the charter to appoint a *finance and general purposes committee* from among its own members. Up to the present time this committee has concerned itself solely with questions of finance. The governing body also has to establish a *school council* constituted as follows:—

Three to be appointed by the governing body.

Three physicians, three surgeons, and three other persons, whether or not physicians or surgeons, being representatives of the medical and scientific staff of the hospital, and of hospitals and institutions with which the governing body have made arrangements for co-ordination in providing postgraduate or other medical or scientific education in London, to be appointed by any committee or other body representing the medical and scientific staff of the hospital.

Members of the staff of the school who are University professors, and such other heads of departments of the school, whether clinical departments or not, as the governing body of the school may from time to time determine.

The Dean for the time being of the School.

The Medical Officer for the time being of the London County Council, or a person nominated by him.

The functions of the school council are to consider and report to the governing body of the school upon academic matters and questions of educational policy, including:—

(a) The representation of the school on boards of advisers for the appointment of Professors and Readers in the University of London.

(b) Application to the Senate of the University of London for the recognition of teachers in the school.

(c) Applications of candidates for teaching appointments on the staff of the school and of the hospital, and for resident appointments on the staff of the hospital other than resident appointments made by the London County Council.

(d) Communications from Universities and other examining bodies and from the General Medical Council.

(e) The discipline of students admitted to the school.

(f) Any other questions which may be referred to them by the governing body.

In addition to the committees appointed under the terms of the charter, the governing body have approved the appointment of certain other committees, the largest of which is a Board of Studies.

Agreement between the London County Council and the Governing Body of the School.

The material provisions of the agreement entered into by the Council and Governing Body were, in broad outline, as follows:—

(i) Initial capital works, including demolition and adaptations of buildings—to be carried out by the Council in accordance with the agreed plans and the Council to enter into such contracts as it might consider fit for the carrying out of the works, the cost being borne in equal parts by the Council and the School.

(ii) Tenancy arrangements—On completion of the works the Council to grant to the school a licence to occupy the school premises for a term of 999 years for a payment of 5s. a year. The Council also to be responsible for insurance and for the provision and maintenance of water, gas, electricity, and heating services, recovering from the school a proper proportion of the expense.

(iii) Equipment—the equipment needed for the sole use of the hospital and the sole use of the school to be provided in accordance with schedules to be agreed between the parties, and maintained respectively by the Council and the school. The cost of certain joint equipment to be borne in proportions to be agreed.

(iv) Staff—The number, nature, duties and pay of the professional staff of the school having duties at the hospital to be agreed from time to time by the Council and the school. The staff in question to be appointed and paid by the school, subject to the approval of the Council, which will contribute towards the cost an amount calculated on the basis of the sum which would have been payable by the Council for consultant and similar staff and for laboratory work if the school were not attached to the hospital.

The nursing staff of the hospital to be appointed and paid by the Council. The domestic, engineering and maintenance staff to be appointed and paid by the Council, the school to repay a proportion of the cost of this staff utilised by it. (Either party may appoint and pay additional staff.)

(v) Postgraduate medical students—An agreed number of postgraduate medical students (not being resident medical officers appointed by the Council to the permanent staff of the hospital) to be resident at the hospital and, unless otherwise arranged, a quarter of these to be nominated by the Council and three-quarters by the school subject to the approval of the Council, but the Council to be entitled to the services of the whole of such students in connexion with the work of the hospital in such manner as shall be agreed. The Council to provide lodging and maintenance for these resident students, recovering from the school the cost in respect of those nominated by the school. Non-resident students attending the school to be admitted in such a manner as the school shall determine.

(vi) Excess cost due to presence of school—If the Council considers that any item of the maintenance expenses of the hospital is excessive by reason of the presence of the school, the school to pay such proportion of the excessive cost as shall be agreed. In considering whether any item is excessive the statement of costs in the Council's accounts relating to its general hospitals in the same financial year to be taken as a basis, due regard being had to the special character of Hammersmith Hospital.

(vii) Joint Advisory Committee—A joint committee of 4 members nominated by the Council and 4 members nominated by the school to be appointed to advise the parties on matters jointly affecting them. The clerical staff of the joint committee to be appointed by the Council and the expenses borne in equal moieties.

(viii) Miscellaneous—Suitable provision is made in the Agreement for control of staff and students by the Council and the school for indemnification in respect of claims by patients by reason of negligence, for arbitration in default of agreement, etc.

APPENDIX P.

List of Bodies (other than Government Departments) and Persons who submitted Evidence to the Committee.

PART I.

NAMES OF WITNESSES EXAMINED.

University of Birmingham.

Professor L. G. Parsons, M.D., F.R.C.P., Dean of the Faculty of Medicine, and Professor of Diseases of Children.

Professor S. G. Barling, C.M.G., M.S., M.Ch., F.R.C.S., Professor of Surgery.

Professor A. C. Frazer, Ph.D., M.D., Professor of Pharmacology.

Professor H. P. Gilding, M.A., M.D., Professor of Physiology.

Dr. A. V. Neale, M.D., F.R.C.P., D.P.H.

University of Bristol.

Professor R. J. Frocklehurst, M.A., D.M., Dean of the Faculty of Medicine and Professor of Physiology.

Professor C. Bruce Perry, M.D., F.R.C.P., Professor of Medicine.

University of Cambridge.

Dr. T. S. Hele, O.B.E., M.A., M.D., F.R.C.P., D.P.H., Vice-Chancellor and Master of Emmanuel College.

Professor E. D. Adrian, O.M., M.A., M.D., F.R.C.P., F.R.S., Professor of Physiology.

Professor H. R. Dean, M.A., M.D., F.R.C.P., Professor of Pathology.

Mr. J. T. Saunders, M.A., Secretary-General of the Faculties.

University of Durham.

The Rt. Hon. Lord Eustace Percy, M.A., D.C.L., LL.D., Vice-Chancellor.

Professor R. B. Green, M.A., M.B., B.S., F.R.C.S., Dean of the Faculty of Medicine, and Professor of Anatomy, King's College, Newcastle-upon-Tyne.

Professor J. C. Spence, M.C., M.D., F.R.C.P., Professor of Child Health.

University of Leeds.

Mr. B. Morat Jones, D.S.O., M.A., Vice-Chancellor.

Professor M. J. Stewart, M.B., Ch.B., F.R.C.P., F.R.F.P.S., Dean of the Faculty of Medicine and Professor of Pathology.

Dr. J. T. Ingram, M.D., F.R.C.P.

University of Liverpool.

Sir Arnold McNair, C.B.E., M.A., LL.D., F.B.A., Vice-Chancellor.

Professor Henry Cohen, M.D., F.R.C.P., Professor of Medicine.

Professor T. B. Davie, B.A., M.D., F.R.C.P., Professor of Pathology.

Mr. J. T. Morrison, O.B.E., M.B., Ch.B., F.R.C.S., Clinical Sub-Dean.

University of Manchester.

Sir Ernest D. Simon, M.A., Chairman of the Council.

Sir William Clare Lees, Bt., O.B.E., Treasurer.

Professor J. C. Bramwell, M.A., M.D., F.R.C.P., Professor of Systematic Medicine.

Professor Daniel Dougal, M.C., T.D., M.D., F.R.C.O.G., Professor of Obstetrics and Gynaecology.

Professor A. D. MacDonald, M.Sc., M.A., M.D., Dean of the Medical School and Leech Professor of Materia Medica, Therapeutics, and Pharmacology.

Professor John Morley, M.B., Ch.M., F.R.C.S., Professor of Surgery.

Professor Harry Platt, M.D., M.S., F.R.C.S., Professor of Orthopaedic Surgery.

University of Oxford.

Sir E. Farquhar Buzzard, Bt., K.C.V.O., LL.D., M.A., M.D., F.R.C.P.
 Professor A. W. M. Ellis, M.A., D.M., F.R.C.P.
 Professor E. G. T. Liddell, M.A., M.D., F.R.S., Waynflete Professor of Physiology.
 Mr. Douglas Veale, M.A., Registrar.

University of Sheffield.

Professor G. A. Clark, V.D., M.D., Dean of the Faculty of Medicine and Professor of Physiology.
 Mr. Vincent Townrow, M.B., B.S., F.R.C.S., Chairman of the Clinical Medical Studies Committee.
 Professor E. J. Wayne, M.Sc., Ph.D., M.D., F.R.C.P., Professor of Pharmacology and Therapeutics.

University of Wales.

Provost A. W. Sheen, C.B.E., M.S., M.D., F.R.C.S., Provost of the Welsh National School of Medicine.
 Professor R. M. F. Picken, B.Sc., M.B., Ch.B., D.P.H., Professor of Preventive Medicine.

University of London.

Professor F. Horton, Sc.D., D.Sc., F.R.S., Vice-Chancellor.
 Mr. H. Claughton, C.B.E., B.A., Principal.
 Sir Francis Fraser, M.A., M.D., F.R.C.P., Professor of Medicine.
 Sir William Girling Ball, F.R.C.S., Dean of the Faculty of Medicine.
 Professor B. A. McSwiney, B.A., Sc.D., M.E., B.Ch., F.R.S., Professor of Physiology.
 Professor J. Paterson Ross, M.B., M.S., F.R.C.S., Professor of Surgery.

British Post-graduate Medical School.

Colonel A. H. Proctor, D.S.O., M.D., M.S., F.R.C.S., Dean.
 Sir Francis Fraser, M.A., M.D., F.R.C.P., Professor of Medicine.
 Professor James Young, D.S.O., M.D., F.R.C.S., F.R.C.O.G., Professor of Obstetrics and Gynaecology.

Charing Cross Hospital Medical School.

Mr. Philip Inman, Chairman of the Hospital.
 Dr. R. A. Hickling, B.A., M.D., F.R.C.P., Dean.
 Mr. C. Jennings Marshall, M.D., M.S., F.R.C.S., Chairman of the Medical Committee.
 Dr. H. W. C. Vines, M.A., M.D.
 Mr. Wyndham Edwards, Secretary.

Guy's Hospital Medical School.

Mr. T. J. Evans, M.A., Dean.
 Mr. E. G. Slesinger, O.B.E., B.Sc., M.B., M.S., F.R.C.S.
 Mr. W. R. Spurrell, M.Sc., M.B., M.S., F.R.C.S.

King's College London.

Dr. W. R. Halliday, M.A., LL.D., Principal.
 Professor T. Nicol, M.D., D.Sc., F.R.C.S., F.R.S. Ed., Professor of Anatomy.

King's College Hospital Medical School.

The Viscount Hambleden, Chairman.
 Mr. J. B. Hunter, M.C., M.A., M.B., M.Ch., F.R.C.S., Dean.
 Mr. W. Gilliatt, C.V.O., M.D., M.S., F.R.C.S., F.R.C.O.G.
 Mr. S. C. Ranner, M.A., Secretary.

London Hospital Medical College

Dr. A. E. Clark-Kennedy, M.A., M.D., F.R.C.P., Dean.
 Dr. H. Evans, M.D., F.R.C.P.

London (Royal Free Hospital) School of Medicine for Women

Mr. Malcolm J. Henderson, Chairman of the Council.
 Miss E. Bolton, C.B.E., M.D., Dean.
 Mrs. H. C. Gregory, M.D., F.R.C.P.
 Professor Mary F. Lucas Keene, M.B., B.S., D.Sc., Professor of Anatomy.

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Appendix A.—The existing health services; general survey of the present situation and its origins.

Appendix B.—Earlier discussions of improved health services and an outline of events leading up to the preparation of this Paper.

Appendix C.—Possible methods of securing local administration over larger areas than those of present local government.

Appendix D.—Remuneration of general practitioners.

Appendix E.—Finance of the new service.

INTRODUCTORY.

The Government have announced that they intend to establish a comprehensive health service for everybody in this country. They want to ensure that in future every man and woman and child can rely on getting all the advice and treatment and care which they may need in matters of personal health; that what they get shall be the best medical and other facilities available; that their getting these shall not depend on whether they can pay for them, or on any other factor irrelevant to the real need—the real need being to bring the country's full resources to bear upon reducing ill-health and promoting good health in all its citizens.

The idea of a full health and medical service for the whole population is not a completely new one, arising only as part of post-war reconstruction. In the long and continuous process by which this country has been steadily evolving its health services the stage has been reached, in the Government's view, at which the single comprehensive service for all should be regarded as the natural next development. The end of the war will present the opportunity, and plans for post-war reconstruction provide a setting, but the proposal to set up a comprehensive service has to be seen against the past as well as the future and to be recognised as part of a general evolution of improved health services which has been going on in this country for generations. The case for it stands on its own merits, irrespective of the war or of other proposals for post-war reorganisation, although it must form an essential part of any wider proposals for social insurance which may be put into operation. Nor is it a question of a wholly new service, but of one with many roots already well established. The methods of organising it must be closely related to history and to past and present experience.

The decision to establish the new service applies, of course, to Scotland as well as to England and Wales and the present Paper is concerned with both countries. The differing circumstances of Scotland are bound to involve certain differences of method and of organisation, although not of scope or of object. To draw distinctions throughout the Paper in regard to the detailed application of the new proposals in each country would unduly complicate the text. For this reason the principal differences which arise in applying the proposals to Scotland are reviewed all together, in chapter VII. Similarly most of the Paper has, for convenience, to be expressed in terms (e.g. in its references to local authorities) which are not equally appropriate to both countries. Subject to the review of the main differences in chapter VII these terms should normally be taken as covering whatever is their counterpart in Scotland. Throughout the Paper references to the Minister should normally be construed as references to the Minister of Health in the case of England and Wales and the Secretary of State for Scotland in the case of Scotland.

The purpose of the Paper is to examine the subject generally, to show what is meant by a comprehensive service and how it fits with what has been done in the past or is being done in the present, and so to help people to look at the matter for themselves. The proposals made in the Paper (and summarised at the end) represent what the Government believe to be the best means of bringing the service into effective operation. The Government want these proposals to be freely examined and discussed. They will welcome constructive criticism of them, in the hope that the legislative proposals which they will be submitting to Parliament may follow quickly and may be largely agreed.

I.

THE PRESENT SITUATION.

The record of this country in its health and medical services is a good one. The resistance of people to the wear and tear of four years of a second world war bears testimony to it. Achievements before the war—in lower mortality rates, in the gradual decline of many of the more serious diseases, in safer motherhood and healthier childhood, and generally in the prospect of a longer and healthier life—all substantiate it. There is no question of having to abandon bad services and to start afresh. Reform in this field is not a matter of making good what is bad, but of making better what is good already.

The present system has its origins deep in the history of the country's social services. Broadly, it is the product of the last hundred years, though some of its elements go much farther back. But most of the impetus has been gathered in the last generation or two, and it was left to the present century to develop most of the personal health services as they are now known.

This historical process, and the health services so far emerging from it, must be looked at in some detail if the present situation is to be understood and if new proposals are to take proper account of it. There is, therefore, appended to this Paper (in Appendix A) a general survey of the medical and health services as they exist now, and of the way in which they came into being. Some features of the present services will also be discussed as they arise in later parts of this Paper, when the different branches of medical care—general, specialist, hospital and others—are considered in more detail. The immediate question is how far the present arrangements are inadequate and what are the reasons for altering or adding to them.

The main reason for change is that the Government believe that, at this stage of social development, the care of personal health should be put on a new footing and be made available to everybody as a publicly sponsored service. Just as people are accustomed to look to public organisation for essential facilities like a clean and safe water supply or good highways, accepting these as things which the community combines to provide for the benefit of the individual without distinction of section or group, so they should now be able to look for proper facilities for the care of their personal health to a publicly organised service available to all who want to use it—a service for which all would be paying as taxpayers and ratepayers and contributors to some national scheme of social insurance.

In spite of the substantial progress of many years and the many good services built up under public authority and by voluntary and private effort, it is still not true to say that everyone can get all the kinds of medical and hospital service which he or she may require. Whether people can do so still depends too much upon circumstance, upon where they happen to live or work, to what group (e.g. of age, or vocation) they happen to belong, or what happens to be the matter with them. Nor is the care of health yet wholly divorced from ability to pay for it, although great progress has already been made in eliminating the financial barrier to obtaining most of the essential services. There is not yet, in short, a comprehensive cover for health provided for all people alike. That is what it is now the Government's intention to provide.

To take one very important example, the first-line care of health for everyone requires a personal doctor or a family doctor, a general medical practitioner available for consultation on all problems of health and sickness. At present, the National Health Insurance scheme makes this provision for a

large number of people; but it does not give it to the wives and the children and the dependants. For extreme need, the older Poor Law still exists. For some particular groups there are other facilities. But for something like half the population, the first-line health service of a personal medical adviser depends on what private arrangements any particular person can manage to make.

Even if a person has a regular doctor—and this is not now assured to all—there is no guaranteed link between that doctor and the rest of necessary medical help. The doctor, both in private practice and in National Health Insurance practice, has to rely on his own resources to introduce his patient to the right kinds of special treatment or clinic or hospital—a great responsibility in these days of specialised medicine and surgery—or the patient has to make his own way to whatever local authority or other organisation happens to cater for his particular need.

When a hospital's services are needed, it is far from true that everyone can get all that is required. Here it is not so much a question of people not being eligible to get the services which they need, as a matter of the practical distribution of those services. The hospital and specialist services have grown up without a national or even an area plan. In one area there may be already established a variety of hospitals. Another area, although the need is there, may be sparsely served. One hospital may have a long waiting list and be refusing admission to cases which another hospital not far away could suitably accommodate and treat at once. There is undue pressure in some areas on the hospital out-patient departments—in spite of certain experiments which some of the hospitals have tried (and which should be encouraged) in arranging a system of timed appointments to obviate long waiting. Moreover, even though most people have access to a hospital of some kind, it is not necessarily access to the right hospital. The tendency in the modern development of medicine and surgery is towards specialist centres—for radiotherapy and neurosis, for example—and no one hospital can be equally equipped and developed to suit all needs, or to specialise equally in all subjects.* The time has come when the hospital services have to be thought of, and planned, as a wider whole, and the object has to be that each case should be referred not to one single hospital which happens to be "local" but to whatever hospital concentrates specially on that kind of case and can offer it the most up-to-date technique.

Many services are also rendered by local authorities and others in special clinics and similar organisations, designed for particular groups of the population or for particular kinds of ailment or medical care. These are, for the most part, thoroughly good in themselves, and they are used with advantage by a great many people in a great many districts. But, owing to the way in which they have grown up piecemeal at different stages of history and under different statutory powers, they are usually conducted as quite separate and independent services. There is no sufficient link either between these services themselves or between them and general medical practice and the hospitals.

In short, general medical practice, consultant and specialist opinion, hospital treatment, clinic services for particular purposes, home nursing,

* Fracture treatment is a single example. It is now a highly specialised service, coupled with the modern aim of total rehabilitation and re-employment. A fracture may be mended in a local hospital, and all the associations of habit and local interest may foster recourse to the local hospital in such cases. But the plain fact may be that ten or twenty miles away is a highly developed fracture centre, specialising in total rehabilitation of this kind of case, which the local people ought to be able regularly to use in preference to their "own" hospital. The difference between the facilities which the two hospitals can offer may determine whether or not the patient ultimately makes a full recovery from the effects of his injury.

midwifery and all other branches of health care need to be related to one another and treated as many aspects of the care of one person's health. That means that there has to be somewhere a new responsibility to relate them, if a service for health is to be given in future which will be not only comprehensive and reliable but also easy to obtain.

Last, but not least, personal health still tends to be regarded as something to be treated when at fault, or perhaps to be preserved from getting at fault, but seldom as something to be positively improved and promoted and made full and robust. Much of present custom and habit still centres on the idea that the doctor and the hospital and the clinic are the means of mending ill-health rather than of increasing good health and the sense of well-being. While the health standards of the people have enormously improved, and while there are gratifying reductions in the ravages of preventable disease, the plain fact remains that there are many men and women and children who could be and ought to be enjoying a sense of health and physical well-being which they do not in fact enjoy. There is much sub-normal health still, which need not be, with a corresponding cost in efficiency and personal happiness.

These are some of the chief deficiencies in the present arrangements which, in the view of the Government, a comprehensive health service should seek to make good.

II.

THE NEXT STAGE:

A COMPREHENSIVE SERVICE FOR ALL.

The idea of moving on to the next stage has been developing for some time. There is much agreement on what the aim should be, if not on the method of achieving it. The general idea of a fuller and better co-ordinated service has been supported in most knowledgeable quarters—professional and lay—by official Commissions and Committees, by interested public or voluntary organisations and persons, in reports, in articles and in books, before the war and during it. Some reference to these is included in Appendix B, where a summary is also given of the preliminary discussions and events which have preceded the issue of this Paper.

The method of approach.

There are two possible ways of approaching the task. One, with all the attraction of simplicity, would be to disregard the past and the present entirely and to invent *ad hoc* a completely new organisation for all health requirements. The other is to use and absorb the experience of the past and the present, building it into the wider service. The Government have adopted the latter method, as more in accord with native preference in this country.

There is a certain danger in making personal health the subject of a national service at all. It is the danger of over-organisation, of letting the machine designed to ensure a better service itself stifle the chances of getting one. Yet medical resources must be better marshalled for the full and equal service of the public, and this must involve organisation—with public responsibility behind it. It is feasible to combine public responsibility and a full service with the essential elements of personal and professional freedom for the patient and the doctor; and that is the starting point of this Paper's proposals. Throughout, the service must be based on the personal relationship of patient and doctor. Organisation is needed to ensure that the service is there, that it is there for all, and that it is a good service; but organisation must be seen as the means, and never for one moment as the end.

Nor should there be any compulsion into the service, either for the patient or for the doctor. The basis must be that the new service will be there for everyone who wants it—and indeed will be so designed that it can be looked upon as the normal method by which people get all the advice and help which they want; but if anyone prefers not to use it, or likes to make private arrangements outside the service, he must be at liberty to do so. Similarly, if any medical practitioner prefers not to take part in the new service and to rely wholly on private work outside it, he also must be at liberty to do so.

The scope of a "comprehensive" service.

The proposed service must be "comprehensive" in two senses—first, that it is available to all people and, second, that it covers all necessary forms of health care. The general aim has been stated at the beginning of this Paper. The service designed to achieve it must cover the whole field of medical advice and attention, at home, in the consulting room, in the hospital or the sanatorium, or wherever else is appropriate—from the personal or family doctor to the specialists and consultants of all kinds, from the care of minor ailments to the care of major diseases and disabilities. It must include ancillary services of nursing, of midwifery and of the other things which ought to go with medical care. It must secure first that everyone can be sure of a general medical adviser to consult as and when the need arises, and then that everyone can get access—beyond the general medical adviser—to more specialised branches of medicine or surgery. This cannot all be perfected at a stroke of the pen, on an appointed day; but nothing less than this must be the object in view, and the framing of the service from the outset must be such as to make it possible.

Temporary exceptions to "comprehensiveness."

For a time some aspects of the new service will be less complete than could be wished. A full dental service for the whole population, for instance, including regular conservative treatment, is unquestionably a proper aim in any whole health service, and must be so regarded. But there are not at present, and will not be for some years, enough dentists in the country to provide it. Until the supply can be increased, attention will have to be concentrated on priority needs. These must include the needs of children and young people and of expectant and nursing mothers. The whole dental problem is a peculiarly difficult one, and a Committee under the chairmanship of Lord Teviot has been set up by the two Health Ministers to consider and report on it.

There may be similar (though perhaps less acute) difficulties in getting a full service in ophthalmology. But these, like the difficulties in dentistry, must be treated rather as practical problems arising in the operation of a new service than as matters of doubt in planning the service's scope and objectives.

Mental health.

The inclusion of the mental services also presents some difficulty, until a full re-statement of the law of lunacy and mental deficiency can be undertaken. Yet, despite the difficulty, the mental health services should be included. The aim must be to reduce the distinctions drawn between mental ill-health and physical ill-health, and to accept the principle declared by the Royal Commission on Mental Disorder that "the treatment of mental disorder should approximate as nearly to the treatment of physical ailments as is consistent with the special safeguards which are indispensable when the liberty of the subject is infringed."

Some misconceptions about the meaning of "comprehensive."

There is one common misconception about the meaning of a "comprehensive" health service. Such a service emphatically has to comprehend all kinds of personal health treatment and medical advice. But that does not mean that there should be no other Government or private activity involving the use of the medical expert, or having any bearing upon health. There are many specialised and separate forms of undertaking—such as the supervision of industrial conditions—which may affect health and which may require the medical expert as much as they require the engineering or the legal or any other expert, but which cannot, simply for that reason, be regarded as necessarily part of the personal health service.

The present system of factory medical inspection and the arrangements made for the employment by industry of "works doctors" (described in Appendix A) are cases in point. From the point of view of industrial organisation, of working conditions in factory, mine and field, there is a continuing and specialised need for enlisting medical skill in ensuring a proper working environment, a proper allocation of types of work to the individual worker's capacity, a proper standard of working hygiene and a general protection of the worker's welfare. The enlistment of medical help for these purposes is part of the complex machinery of industrial organisation and welfare, and it belongs to that sphere more than to the sphere of the personal doctor and the care of personal health—which centres on the individual and his family and his home. What matters is that such specialised services, where they exist, should not impair the unity of personal health service on which he will rely; that, where there arises—perhaps first detected in workplace or factory—a question of personal medical treatment or consultation (beyond recognised incidental services of the kind described in Appendix A) this should be regarded as a matter for the personal health service.

Another example is that of the school medical service. Very similar considerations apply. It should be the part of any school medical arrangements to refer the school child for any and every form of personal doctoring to the general health service—the family doctor and other resources which that service will provide. But that does not mean that as an integral part of the educational organisation the education authorities should not have their own arrangements for looking after medical and welfare conditions in the schools, for maintaining inspection and supervision of the child in the school group, and indeed for providing, until the new health service is fully developed, such forms of treatment as may be needed by the children and may not otherwise be available for them.

The proper continuance of environmental and preventive services in school and industry may well be coupled with the habit of using for those services doctors who are also engaged in the personal health service—so that there is a continuous blending of experience in both kinds of work. With the bulk of the profession engaged, part-time or whole-time, in the new service, this process can be more readily accelerated and arrangements more readily made for proper post-graduate training of general practitioners who are going to engage in industrial or other specialties appropriate to general practice. Similarly, while matters like industrial organisation require medical as well as other experts in the central departments of Government which deal with them, there is room for a better linking of the expert staffs so engaged with the expert staffs whose time is wholly or mainly given to the personal health and treatment services.

There is also another point on which it is necessary to be clear. The subject of health, in its broadest sense, involves not only medical services

but all those environmental factors—good housing, sanitation, conditions in school and at work, diet and nutrition, economic security, and so on—which create the conditions of health and prepare the ground for it. All these are fundamental; all of them must receive their proper place in the wider pattern of Government policy and of post-war reconstruction. But they are not the subject of this particular Paper, which is concerned exclusively with the direct services of personal health care and advice and treatment. No matter how successful the indirect influence of the environmental services may become in promoting good health and reducing sickness, there will remain a need for medical and nursing and hospital services.

General nature of the Government's proposals

The rest of this Paper is concerned with the Government's proposals for bringing the new comprehensive service into being. First, the administrative structure, central and local, will be considered. Then each of the main branches—the hospital and consultant services, the general practitioner service, and the local clinic and other services—will be discussed in some detail. After that, the special circumstances of the service in Scotland will be reviewed, and the Paper will end with a general summary of what is proposed.

At this stage, therefore, before the more detailed part of the Paper begins, it may make subsequent reading easier if the broad shape of the proposals is indicated.

It is proposed that the new responsibility for providing the comprehensive service shall be put upon an organisation in which both central and local authority take part, and which both centrally and locally is answerable to the public in the ordinary democratic manner. Central responsibility will lie with the Minister, local responsibility will lie with the major local government authorities (the county and county borough councils) operating for some purposes severally over their existing areas and for other purposes jointly over larger areas formed by combination. Both at the centre and locally, special new consultative bodies are proposed, for ensuring professional guidance and the enlistment of the expert view. At the centre, in addition, a new and mainly professional body is to be created, to perform important executive functions in regard to general medical practice in the new service.

The new joint authorities, i.e. the counties and county boroughs in combination, will be responsible (over suitable areas determined by the Minister after consulting the local interests) for assessing the needs of those areas in all branches of the new service and for planning generally how those needs should best be met. They will do this in consultation with the local professional bodies referred to, and they will submit their proposed arrangements to the Minister for final settlement in each case.

Then, when each area plan is settled, the joint authority will have the duty of securing all the hospital and consultant services covered by it, by their own provision and by arrangements with the voluntary hospitals in the area, and they will for this purpose be responsible in future for the existing local authority hospitals of all kinds. The individual county and county borough councils making up the joint authority will usually be responsible for local clinic and other services within the general framework of the plan, but there will be special provision for the child welfare services—to ensure a close relation between them and child education. General medical practice in the new scheme will be specially organised, largely as a national and centralised service, but with proper links with the local organisation, to

relate it to the hospitals and to other branches of the service as a whole. There will be certain variations of these proposals for Scotland, to suit the differing circumstances there.

The new service will be free to all apart from possible charges where certain appliances are provided. (The payment of disability benefits during sickness—and related questions as to the adjustment of benefit during periods of free maintenance in hospital—are matters which belong to the Government's proposals on social insurance, to be published in a later Paper). The costs of the new health service will be borne partly from central funds, partly from local rates and partly from the contributions of the public under any scheme of social insurance which may be brought into operation.

III.

THE GENERAL ADMINISTRATIVE STRUCTURE OF THE SERVICE.

If people are to have a right to look to a public service for all their medical needs, it must be somebody's duty to see that they do not look in vain. The right to the service involves the corresponding duty to see that the service is provided. Some organisation has to carry that duty, and as the service is to be publicly provided this involves responsible public authority in some form.

CENTRAL AND LOCAL RESPONSIBILITY.

With the exception of medical benefit under the National Health Insurance scheme the public health services of this country have from the outset been administered by some form of local government organisation. In the case of medical benefit the administrative body—the Insurance Committee—though operating over a local area, the county or county borough, is not answerable to a local electorate but consists in the main of persons representing Approved Societies which are non-territorial units. Apart from this exception, in a long series of Public Health Acts and similar measures Parliament has placed the prime responsibility for providing the health services—hospitals, institutions, clinics, domiciliary visiting, and others—on local, rather than central, authority. This system recognises that, in intimate and personal services of this kind, local factors such as distribution of population, transport facilities, the nature of local employment and vocation (and generally local tradition and habit) have a profound influence on detailed planning.

The absorption of the existing services into a comprehensive service does not materially alter this situation. To uproot the present system and to put into the hands of some central authority the direct administration of the new service, transferring to it every institution and every piece of present organisation, would run counter to the whole historical development of the health services; and from a practical point of view a step of this kind would certainly not contribute to the successful and early introduction of the new service. Changes, some of a drastic kind, in the present organisation of local areas and administrative bodies will be necessary. For reasons discussed later the organisation of the services of general practitioners will call for a higher degree of central control than other parts of the service. But there is no case for departing generally from the principle of local responsibility, coupled with enough central direction to obtain a coherent and consistent national service.

CENTRAL ORGANISATION.

Central responsibility must rest with a Minister of the Crown, answerable directly to Parliament and through Parliament to the people. The suggestion

has been made that, while this principle should be accepted, there is a case for replacing the normal departmental machinery by some specially constituted corporation or similar body (perhaps largely made up of members of the medical profession) which would, under the general auspices of a Minister, direct and supervise the service. The exact relation of this proposed body to its Minister has never been defined, and it is here that the crux lies. If in matters both of principle and detail decision normally rested in the last resort with the Minister, the body would in effect be a new department of Government—no less than (say) the National Health Insurance Commission, which was later replaced by the Ministry of Health, or the present Board of Control or Prison Commission. If, on the other hand, certain decisions were removed from the jurisdiction of the Minister (and consequently from direct Parliamentary control) there would be need to define with the utmost precision what those decisions were. Clearly they could not include major questions of finance. Nor could any local government authorities responsible for local planning or administration reasonably be asked to submit to being over-ruled by a body not answerable to Parliament.

Nevertheless, the Government recognise that the provision of a health service involves technical, issues of the highest importance and that in its administration, both centrally and locally, there is room for special devices to secure that the guidance of the expert is available and does not go unheeded. Otherwise the quality of the service is bound to suffer. They also recognise that, in a service which will affect the professional life of almost every doctor, there is need within the administrative structure for some largely professional body which can concern itself with the professional welfare of doctors who take part in the service. The proposals which follow are designed to meet this situation.

Central responsibility of the Minister

There will be direct responsibility to Parliament, therefore, resting on the Minister of Health and the Secretary of State for Scotland, respectively.

A Central Health Services Council.

At the side of the Minister, but independent of him, there will be created a special professional and expert body. It might be called the Central Health Services Council, and it will be a statutory body.

Its function will be to express the expert view on any general technical aspect of the service. There cannot be dual responsibility for the service and so it will be consultative and advisory, and not executive. It will be entitled to advise, not only on matters referred to it by the Minister, but on any matters within its province on which it feels it right to express its expert opinion, and the Minister—quite apart from any other publication of the Council's views and proceedings which he may from time to time make—will be required to submit to Parliament annually a report on the Council's work during the year. The Minister, in addition to the regular and general consultation which he will obviously want to maintain with such a body, will refer to it in draft form any general regulations which he proposes to make in the new service on subjects within its expert field.

The constitution of such a body, given statutory recognition as the mouth-piece of expert opinion in the central administration, will obviously need to be considered carefully and in detail with the professional and other organisations concerned. At this stage only the general kind of constitution which might suit its purpose and function can be suggested.

It will, it is assumed, be primarily medical in its make-up, because the main technical aspects of the health service in all its branches will be

medical. But it will not be wholly medical; it will need to be able to provide an expert view on many questions—e.g. of hospital administration, nursing, midwifery, dentistry, pharmacy and auxiliary services—which will involve other experts than the physician or surgeon. Yet, to be effective, it must not be too large and unwieldy; nor could much of its varied work be regularly done by the single full Council. The Council itself might consist of about thirty or forty members, representing the main medical organisations (specialist and general), the voluntary and municipal hospitals (with both medical and other representation), medical teaching and professions like dentistry, pharmacy and nursing and midwifery. For any of its special purposes the Council could establish small groups or sub-committees, on each of which it would be possible to introduce additional experts in the particular subject referred—the Council itself, however, retaining an ultimate single responsibility for all views or advice expressed in its name.

The members will be appointed by the Minister in consultation with the professional and other organisations concerned, and the Council will select its own chairman and regulate its own procedure. The Minister will be prepared to provide a secretariat, and the expenses of the Council will be met from public funds.

Central Medical Board.

There will also be set up, for certain specific purposes, a Central Medical Board. This will be in a different category from the Central Health Services Council, inasmuch as it will perform executive functions in the day-to-day working of the general practitioner service, rather than voice opinion on general matters of medical policy.

It is mentioned here only to complete the picture of the central organisation. Its duties and its constitution will need to be referred to in chapter V, when the participation of doctors in the service and the terms and conditions of that participation are considered.

LOCAL ORGANISATION.

Local organisation is inevitably more complex. The new service has to include hospitals and institutional services for the sick in general, for mental cases, for infectious diseases and tuberculosis, for maternity and for every general and special hospital subject. It has to include the many kinds of service usually provided in local clinics, a family doctor service and many ancillary services—nursing, health visiting, midwifery and others. It ranges from the one extreme of highly specialised services, requiring relatively few centres for the country as a whole, to the other extreme of services involving a large number of local clinics and arrangements for care in the individual home.

Suggestions have been made for a completely new kind of local or "regional" authority—sometimes proposed as a vocational or technical body (like the special kind of central organisation already mentioned). In so far as those suggestions would conflict with the principle of public responsibility, they need not be considered here. Both the principles applied to central organisation—that of democratic responsibility and that of full professional guidance—must be equally applied to local organisation.

Service to be based on local government.

The present local government system amply embodies the former of these principles—that of democratic responsibility—and the existing local authorities are already responsible for many kinds of personal health service which will need to be incorporated in the new and wider service in future. It is certainly no part of the Government's intention to supersede and to waste these good

existing resources, or needlessly to interfere with the well-tested machinery of local government as it is already known; nor would the record and experience of the existing local authorities in the personal health services justify such a course. On the contrary the Government propose to take as the basis of the local administration of the new service the county and county borough councils. But there are some requirements of the new service which the county and county borough councils cannot fulfil if they continue to act separately, each for its independent area; and changes will be necessary. In particular, for the future hospital service, it will be essential to obtain larger local areas than at present, both for planning and administration. The special needs of this service can be considered first.

Need for larger administrative areas for the hospital service.

Broadly speaking the hospital services, so far as they are publicly provided now, are in the hands of the county and county borough councils, with the exception of isolation hospitals for infectious disease in the counties. The size of counties and county boroughs varies enormously—ranging (without counting London) from Rutland and Canterbury, with populations of some 18,000 and 26,000 respectively, to Middlesex and Birmingham with populations of over 2,000,000 and 1,000,000.

It would be theoretically possible to put upon the council of each county and county borough the duty to provide, or to arrange with other agencies for, the whole range of hospital services. This would impose responsibility for the services on authorities many of which lack the size and resources and administrative organisation to plan and conduct and pay for the service. What is more important, it would leave untouched the demarcation between town and country which is reflected in the system of administrative counties and county boroughs, but which has no meaning in relation to hospital services. The towns largely serve the country in the matter of hospitals. If for purposes of hospital administration they are kept apart by continuing the separate county and county borough basis, the result will be a complicated criss-cross pattern of "customer" arrangements, since in most areas (particularly those of counties) it will be out of the question to secure the whole range of service—or even the bulk of it—inside the area boundary. These "customer" arrangements will in turn involve complicated administrative arrangements and a mass of financial adjustments between different areas. Alternatively, if the provision of a complete service within each area were attempted, the resulting system would run counter to the whole conception of an ordered pattern of hospital accommodation and could only lead to wasteful competition in hospital building.

The need for larger areas has long been recognised by local authorities in many branches of hospital administration. The many combinations already in existence make this clear; indeed, the very existence of these combinations would in itself give rise to administrative difficulties if it were decided that the new hospital service as a whole was to be in the hands only of the individual county and county borough councils in future.

The essential needs of a reorganised hospital service, based on a new public duty to provide it in all its branches, are these—

- (a) The organising area needs to cover a population and financial resources sufficient for an adequate service to be secured on an efficient and economical basis.
- (b) The area needs to be normally of a kind where town and country requirements can be regarded as blended parts of a single problem, and catered for accordingly.
- (c) The area needs to be so defined as to allow of most of the varied hospital and specialist services being organised within its boundaries (leaving for inter-area arrangement only a few specialised services).

In the majority of the areas of existing authorities none of the three conditions would be met.

It is therefore necessary to decide what the form of authority for these larger hospital areas should be. On this, various alternatives are examined in Appendix C to this Paper. The course most convenient—and indeed, in the Government's view, the only course possible at the present time—will be to create the larger area authorities by combining for this purpose the existing county and county borough councils, in joint boards operating over areas to be settled by the Minister after consultation with local interests at the outset of the scheme. There will be some exceptional cases (the county of London is the most obvious) where no combination is necessary at all; in such cases an existing authority will fulfil both its own functions and those of the new form of authority—but this will be unusual. Where the new form of joint authority is referred to in the rest of this Paper it should be taken as including any individual council which, in such exceptional circumstances may be acting in the two capacities.

While both planning and administration will usually need to be based on larger areas, this does not mean that a standard-sized area need be, or can be, prescribed for the hospital services. Local conditions—distribution of population, natural trends to various main centres of treatment, geography, transport and accessibility—must determine the size and shape of the optimum area. Sometimes simple combination of a county with the county boroughs within its boundary (i.e. the geographical county as a unit) will be sufficient; sometimes the linking of two or three small counties will be needed, sometimes other variations.

Special mention should be made of the isolation hospitals for infectious diseases, because in the counties these hospitals are with few exceptions owned and administered by the minor authorities and not by the county councils, and therefore a decision to transfer them to the new joint authority will not only remove them from their present owners (as with the hospitals of the counties and county boroughs) but will prevent their present owners from retaining even the part interest in them which membership of the new joint authority will afford in the case of the counties and county boroughs. (It is, of course, not practicable to give direct representation on the joint authority to these minor authorities, without at once duplicating the representation of all local government electors who happen to live in a county and not in a county borough.) The case for this absolute transfer of the isolation hospitals has nothing to do with the past record of the minor authorities, nor is it in any way a reflection upon the quality of the work which they have hitherto done. The whole trend of medical opinion has for some time been in favour of treating these hospitals, not primarily as places for the reception of patients to prevent the spread of infection, but as hospitals where severe and complicated cases of infectious disease can receive expert treatment and nursing. The small isolation hospital of the past century is not only uneconomic in days of rapid transport but cannot reasonably be expected to keep abreast of modern methods. One result of the new outlook will be the development, in addition to the larger isolation hospital serving the densely populated area, of accommodation for infectious diseases in blocks forming part of the general hospitals. These considerations all indicate that the infectious disease hospitals must in future form part of the general hospital system.

It may be, as time goes on, that for certain specialised hospital functions there is room for the development of a few particular centres which would serve national rather than local needs. In this field there may be a case for direct provision or arrangement by the Government centrally. But such provision or arrangement would be special and exceptional and need not be considered here as part of the normal organisation of the new service.

As will be seen, when the hospital services are fully considered in chapter IV, the function of the new joint authorities will be to secure a complete hospital and consultant service of all kinds for each of the new and larger areas—partly by their own direct provision and partly by arrangement with voluntary hospitals, and all on the basis of an area hospital plan which they will formulate in consultation with the hospitals and others concerned, and which will require the Minister's final settlement and approval. The existing powers and duties of the present local authorities in regard to hospital services—including tuberculosis, infectious diseases and mental health—will pass to the joint authorities, together with the existing hospitals and other institutions concerned.

The place of the joint authority outside the hospital service.

Outside the hospital and consultant services—that is, in the kinds of service appropriately given in local clinics and similar premises, or by domiciliary visiting (like midwifery or home-nursing)—the case for centralising all administration in the one authority over the larger area is not the same, and it is the Government's view that there should be as little upsetting of the existing organisation for these services as is compatible with achieving a unified health service for all. It will not be enough, however, simply to leave all these separate services exactly as they are now. What is essential is that, although still locally conducted with all the advantages of local knowledge and enthusiasm, they should be regarded in future as the related parts of a wider whole and should fit in with all the other branches of a comprehensive service in their planning and their distribution. For this purpose it must be the single responsibility of some authority to plan the whole, although not necessarily to provide the parts, and the obvious authority to do this—from the point of view both of its area of operation and of its constitution—will be the new joint authority.

The new joint authority will therefore be charged to examine the general needs of the area from the point of view of the health service as a whole—not only in the hospital services for which it will itself be responsible but also in these more local services. It will have the duty of producing, in consultation with the local authorities and others concerned, an area arrangement or plan for a related service of all kinds—and this will need the approval of the Minister. But, within the general framework of the approved plan, the provision and administration of most of the local services—including some new kinds of service—will normally rest with the individual county and county borough councils, and the joint authority will be concerned only to watch that the general area arrangement proves to be the right one when put into actual operation, that in fact it works out as intended, and that any subsequent additions to it, or amendments of it, which seems to be required are put in hand and submitted to the Minister.

There are, however, some forms of local clinic service which—although provided in separate premises so as to make their facilities more accessible—are in essence out-patient activities of the hospital and consultant services; of which, in fact, the essential feature needs to be treatment and advice at the consultant and specialist level, provided by the same consultants and specialists as serve the hospitals or sanatoria and are based on them. Obvious examples are the tuberculosis dispensaries, mental clinics and cancer diagnostic centres. This kind of service must usually be the responsibility of the same authority as is responsible for the hospitals and consultants over the larger area—the “outpost” service going with the parent service of which it ought to be part. They differ in this respect from the other local services which belong more to the general practitioner sphere—the maternity and child welfare clinics,

school medical services, clinics for general dental or ophthalmic treatment and advice, arrangements for midwifery or home nursing or health visiting, and similar activities. These certainly need to be linked with the consultants and the hospitals for difficult cases (as the area plan will provide), but they do not have to be directly administered with the hospitals, and the counties and county boroughs are normally appropriate areas for their operation.

One case requires special mention. The Local Government Act of 1929 initiated the policy of securing that local child welfare and education responsibilities should be brought closer together, and that the local education authority in each area should as often as possible be the welfare authority. In the view of the Government the time has come to carry that policy to its full conclusion. The destination of the present welfare functions (now exercised partly by county and county borough councils, partly by other local authorities within the counties) will therefore depend upon the decisions taken by Parliament upon the educational functions of these various authorities under the current Education Bill. When the relationship between the county and county borough councils and the minor authorities in regard to education has been settled something on broadly similar lines can be adopted as the arrangement between these authorities in regard to child welfare. This does not mean, however, that this service will be excluded from the general area planning of the health services by the new joint authority. It affects only the local operation of the service.

In dealing with the clinic and other local services generally it will not be wise to prescribe an absolutely hard-and-fast rule to be applied in all circumstances. It may be that in a particular county or county borough of exceptionally small area or resources a case for transferring local functions to the larger joint authority will be overwhelming, in the interests of an efficient service. In another area, for some particular local reason, even some of the dispensary or out-patient functions just described as belonging properly to the hospital and consultant sphere may be found more suitable for discharge by an individual county or county borough. A rigid and universal rule about the allocation of the various services would preclude a good common-sense arrangement on which all were agreed in a particular case. For reasonable flexibility, the detailed allocation of services will be left to be finally settled as best suits each case, but observing the general demarcation described in the absence of any exceptional reason to do otherwise.

This can be achieved in the following way. The new joint authority, in preparing its arrangement or plan for the whole health service of its area and submitting it to the Minister, will include proposals as to the exact allocation of responsibility for providing the various local services covered—i.e., proposals as to which services should be provided by the county and county borough councils severally and which in combination through the joint authority itself. In all cases the hospital and consultant services will be required to be the joint authority's responsibility; in all cases the child welfare service will be required to lie with the same authorities as carry responsibility for education under the new Education Bill; in between these two fixed points the allocation of clinic and other local services can vary to suit exceptional needs, but with the normal rule as stated above—those services which belong essentially to the consultant sphere, like tuberculosis dispensaries, going to the joint authority, while those which do not will rest with the several counties and county boroughs making up that joint authority. The decision, as in other proposals of the area plan, will rest finally with the Minister in each case.

Special considerations will apply to the "family doctor" or general practitioner branch of the new service, which is reviewed in detail in chapter V. The organisation there suggested will be one which is largely

central and national and only partly local. Those main aspects of the service which affect the individual practitioner—including the terms of his participation in the service, the protection of his professional interests and the general personal relationship of the doctor to the new public service—will be governed by central arrangements applicable to the country as a whole. On the other hand it is not proposed that there shall be any question of excluding this branch of the health service from the concern of the new joint authorities to plan, with the Minister, for the requirements of their areas, and the locally planned arrangement of the new service will in each case have regard to resources and needs in the sphere of general practice as well as in hospital and other facilities.

Apart from these local functions in the general practitioner service, there will also be the provision and maintenance of special Health Centres for the grouped medical practice of some of the doctors in the new service, in areas where it is decided to try this form of practice. This, as a function not belonging to the hospital and consultant sphere, will be appropriate to the individual county and county borough councils.

•General.

An important task, therefore, of the new joint authorities will be to unify and to co-ordinate the service. They will be the instrument through which, with the Minister, a rational and effective plan for all branches of the health service in their respective areas is secured. It will be their responsibility to see that their proposals provide for all that the inhabitants of their areas will require, to submit the proposals to the Minister as an area plan for final settlement, and subsequently to keep the plan up to date as requirements develop and to bring before the Minister any necessary changes if the plan is found not to be working out in the manner designed. They will not themselves provide and operate all the services for which the approved area plan provides; nor is there any need for them to do so. They will usually administer themselves only those branches of the service which demand direct administration over the larger area as a whole, and not those which can suitably be administered (when once a unified plan is settled) on a more localised basis. In short, the existing major local authorities will combine to secure, with the Minister, a unified general plan of the whole service for their grouped areas; they will then combine to carry out those parts of this plan which demand a single administration over all their areas together; but they will be charged individually to carry out those parts which can be separately and locally administered.

Professional guidance in local organisation.

In order to secure good professional guidance in the local administration of the new service a special local professional organisation will be established to advise and guide and, if necessary, to initiate new suggestions.

Local Health Services Councils.

The need to ensure technical guidance—by creating special professional and expert bodies for the purpose—offers scope for innovation in local government method and justifies it. What is wanted is that there should be, in each area, some new provision for the organised expression of the views of the expert and for ensuring that the local administration can get the fullest advantage from it. The simplest way will be to apply to local administration the kind of consultative machinery suggested for central administration; i.e. to have in each case a local expert technical body, which might be known as the Local Health Services Council.

The purpose of these bodies will be to provide locally the same kind of medium for expressing the expert point of view on technical aspects of the service as has been proposed at the centre. The appropriate area for each will be the larger areas of the new joint authorities already discussed. Their functions will be not only to advise on matters referred to them by the joint authorities or other local authorities in the area, but also to initiate advice on any matters within their expert province on which they think it right to do so and if they wish, to submit their views and advice not only to the joint authority or other local authorities concerned with the matters in question, but to the Minister. Apart from its ordinary consultation, the joint authority will be required to consult them on the area plan for the local health service which it submits to the Minister, and on subsequent material alterations or additions to that plan.

The constitution and membership of these bodies will call for detailed consideration later. Provided that all the professional interests are fairly represented, there is no reason why the pattern should be precisely uniform throughout the country and the most convenient course will probably be to provide for the matter by way of local schemes approved by the Minister.

Direct professional representation on local authorities.

It is sometimes suggested that the best method of linking the expert point of view with the direct administration of the service would be to include in the local administrative authorities themselves, and in their committees, a proportion of professional members appointed for the purpose by the appropriate professional organisations, with or without voting powers. Arguments can be adduced both for and against a system of this kind, but on balance the Government feel that the risk of impairing the principle of public responsibility—that effective decisions on policy must lie entirely with elected representatives answerable to the people for the decisions that they take—outweighs any advantages likely to accrue.

IV.

HOSPITAL AND CONSULTANT SERVICES.

The term "hospital services" is used in this Paper to include all forms of institutional care of every kind of sickness and injury. It comprises the whole range of general and special hospitals, including infectious disease hospitals, sanatoria for tuberculosis, accommodation for maternity cases and for the chronic sick, and for rehabilitation; and it comprises also the usual ancillary hospital services for pathological examinations, X-ray, electro-therapy, ambulances and other purposes. Out-patient no less than in-patient treatment is included. It will be the aim to restore the out-patient work of the hospitals as much as possible to its proper field of specialist and consultant care, when the existence of a general "family doctor" for all has been secured.

The mental hospitals and mental deficiency institutions have also to be included in the scope of the hospital and consultant part of the new service, under the care of the new joint authorities. They will present many problems of their own, calling for some degree of special organisation to fit them. The present general review does not attempt to deal with this special subject, and the discussion which follows is directed mainly to the more general range of hospital and consultant services—although much of it can obviously be applied to the mental health services as well.

The present hospital services are described in Appendix A. They present two main problems. The first is to bring together over suitable areas the

activities of the various separate and independent hospitals, to ensure that all the different kinds of special and general hospital treatment are so linked that the individual can get the best of each. The second is to enable the two quite different hospital systems (the voluntary hospitals and the municipal hospitals) to join forces in future in a single service.

The proposed joint authority, operating over a large area, has been described. It will be that authority's responsibility, with the Minister, to see that a full hospital service of all kinds is available for people in its area. But the authority neither will, nor will need to, provide the whole service itself.

The part of the voluntary hospital.

The conception of a public authority discharging its duty by contracting with others for the provision of services has long been familiar. As early as 1875 local authorities were enabled both to provide hospitals themselves and to enter into agreements with other hospitals for the reception of people from their district. Later legislation followed similar lines; in recent Acts dealing with special services (e.g., the Midwives Act, 1936, the Cancer Act, 1939) the use of voluntary agencies has been clearly contemplated. There are already large numbers of agreements under which existing local authorities arrange for accommodation in hospitals, sanatoria, dispensaries, or clinics, sometimes belonging to other local authorities and sometimes to voluntary agencies.

The facts of the existing accommodation in voluntary and municipal hospitals (given in Appendix A) make it clear that without the collaboration of the voluntary hospitals it would be many years before the new joint authorities could build up a system adequate for the needs of the whole population; so that, from that point of view alone, the co-operation of the voluntary hospitals is a necessity. But the matter cannot be regarded from that point of view alone. The voluntary hospital movement not only represents the oldest established hospital system of the country, but it attracts the active personal interest and support of a large number of people who believe in it as a social organisation and who wish to see it maintained side by side with the hospitals which are directly provided out of public funds. It is not merely that the best of the voluntary hospitals have, in a degree so far unsurpassed, developed specialist and general hospital resources which they will be able at once to make available, while most of the rest of the voluntary hospitals have experience and an existing organisation which it will be obviously sensible to enlist. It is certainly not the wish of the Government to destroy or to diminish a system which is so well rooted in the good will of its supporters.

Yet the acceptance by the community of responsibility for a service for all might affect fundamentally the position of the voluntary hospitals. A new universal public hospital service might have the gradual effect of undermining the foundations on which the voluntary hospitals are based. If this is not to happen, a way has to be found of combining the general responsibility of the new joint authority for the service with the continued participation in that service of the voluntary movement as such; a way, in fact, of securing a whole service under one ultimate public responsibility without destroying the independence and traditions to which the voluntary hospitals attach value. The Government believe that this can be done, and in settling the details arising out of the following proposals they will welcome the help and the suggestions of the voluntary hospital representatives in securing it.

Preparation of local area plan.

The joint authority's first task will be to assess in detail the hospital needs of its area and the hospital resources available to its area.

This it will do in close consultation with the local expert body, the Local Health Services Council. It is hoped that the hospital surveys, referred to in Appendix B and now nearing completion, will be of valuable help in this.

The authority's next task, in consultation with the local expert body and other local interests (including the voluntary hospitals and, where appropriate, the medical schools) will be to work out a plan of hospital arrangements for its area, based on using, adapting and, where necessary, supplementing existing resources. The object of the plan will be to arrive at the right quantities, kinds and distribution of hospital facilities for the area; to settle where, how, and by what hospitals, each branch of hospital treatment can best be secured; to produce a balanced scheme in which all the necessary specialist facilities in medicine and surgery (including fracture and orthopaedic, gynaecological, paediatric, ophthalmic, psychiatric and others) are provided in due proportion, together with general accommodation for cases, acute or chronic, of the ordinary type. The plan must ensure that the various special treatments are concentrated in centres competent and convenient to provide them, and not dispersed haphazard in uneconomic and overlapping units; that proper linking of services is secured by relating the work of special and general hospitals; that arrangements are at hand for the transfer of patients to the hospitals best suited to their medical needs; and that the skill of the consultant staffs of the various hospitals taking part can be used to the maximum advantage of the area as a whole.

It will be the aim of the authority to make its area (which will have been determined with this in view) as self-sufficient as possible in hospital and consultant services. But where it is obviously more sensible, as in some of the rarer services, the plan will provide for certain services by agreed arrangements outside the area.

The basis of the plan will be that the joint authority will secure the necessary service for its area partly through its own hospitals and institutions, partly through contractual arrangements made with voluntary hospitals for the performance of agreed services set out in the plan, to a minor degree (where necessary) through arrangements with the joint authorities of other areas.

Central approval of local area plans.

The plan will then be submitted to the Minister for approval, and will have no validity until so approved. The Minister, able to look at the country as a whole and at the effect of the local plans one upon another, will have power to modify or supplement the plan before giving his approval. He will consider all objections or representations made to him by local organisations (including the Local Health Services Council), voluntary hospitals or others.

The plan, when approved, will be open to amendment at any time, and the Minister will be empowered to call on the joint authority to reconsider the plan and submit fresh proposals. The procedure for amending the plan will be the same as for its original preparation and will include all necessary local consultation.

No voluntary hospital will be compelled to participate. Its participation will rest on a contract between it and the joint authority to provide the services specified in the plan. Where it agrees to participate, it will—like each of the authority's own hospitals—have to observe certain general conditions, just as it will obtain certain advantages.

General conditions to be observed by hospitals.

These conditions will be settled centrally, for the country as a whole, and they will then become the conditions on which exchequer grant will be payable.

In framing the conditions the Minister will seek the advice of the Central Health Services Council; but the more important conditions will relate to subjects such as the following:—

(a) each hospital will be required to maintain the services which under the approved hospital plan it undertakes to maintain, and generally to comply with the plan;

(b) each hospital will observe certain national requirements such as the Rushcliffe or Taylor rates and conditions for its nursing and midwifery staff and the recommendations of the Hetherington Committee for its domestic staff;

(c) in appointing senior medical and surgical staff each hospital will conform with any national arrangements adopted for regulating appointments and remuneration;

(d) each hospital will be open to visiting and inspection, in respect of its part in the public service, under arrangements laid down centrally;

(e) in the voluntary hospitals conditions to secure reasonable uniformity in accounts and audit will probably be necessary so far as they take part in the new service. The presentation of accounts of municipal hospitals is already largely subject to central direction.

financial arrangements with voluntary hospitals.

As already emphasised, it is the aim of the Government to enable the voluntary hospitals to take their important part in the service without loss of identity or autonomy. But it is essential to this conception that the hospitals should still look substantially to their own financial resources, to personal benefactions and the continuing support of those who believe in the voluntary hospital movement. So long, and so long only, can they retain their individuality. If once the situation were to arise in which the whole cost of the voluntary hospitals' part in the public service (a service designed for the whole population) was repaid from public money, or indeed in which it was recognised that public funds were to be used to guarantee those hospitals' financial security, the end of the voluntary movement would be near at hand.

On this footing, the financial relation between the joint authority and the individual voluntary hospital must be that of an agreement to pay a specified sum in return for services rendered or to be rendered, and this should not be assessed as a total reimbursement of costs incurred. Whether the sum will be calculated in terms of beds or occupied beds, or otherwise, is for the moment immaterial. In order to avoid a large number of individual bargains, and the risk of competitive bargaining leading to undesirable results, it will be convenient for standard payments, in respect of different kinds of hospital service which involve different levels of expense, to be settled centrally. These payments will be made by the joint authorities and will fall on local rates, assisted by exchequer grant.

In addition, both the municipal and the voluntary hospitals will receive a direct grant from central funds which will include the share, attributable to hospital services, of any sum allocated towards the cost of the comprehensive health service from the contributions of the public to any scheme of social insurance. So far as this sum represented contributions by potential patients of hospitals it could fairly be said that the Government would have collected money which might otherwise have been paid to the hospitals direct, and that the proposed grant would thus restore the balance. This grant could be based on the number of beds provided by each hospital, but in the case of voluntary hospitals it would be feasible, if so desired, to regard the aggregate of their share of the payments as a central pool from which payments to individual hospitals could be varied according to the needs and resources of each.

In either case it will be the Minister's responsibility to see that the conditions of the grant are fulfilled. If the idea of a variable grant to the voluntary

hospitals is adopted, the Minister will be prepared to be guided in questions of relative need by some suitable body representing the hospitals, though the final responsibility and decision must remain with him.

Particular regard will need to be given, in connection with the area plans, to the position of hospitals used for the clinical teaching of medical students, and the question of financial assistance in respect of teaching work will be reviewed when the report is available of the Committee on Medical Schools now sitting under the chairmanship of Sir William Goodenough.

Inspection of hospitals.

In a service of this magnitude, in which hundreds of hospitals under different and independent managements will be taking part, the problem of inspection is a difficult one. Apart from special inspection in cases of difficulties arising or changes in contemplation, routine inspections—at not too frequent intervals—would serve the double purpose of bringing to notice defects of organisation or management and, what is equally important, of enabling individual hospitals to be kept in touch with the latest practice and ideas. The foundation of any inspectorate must clearly be a team of highly qualified medical men, but the inspectors need not all be persons employed whole-time on this work; from many points of view there are advantages in employing on a part-time basis medical men or women of distinction in various branches of professional work or medical administration. In addition to doctors, there is scope for experts of various kinds for dealing with an organisation so varied and complex as a modern hospital. Hospital administrators, nurses, catering experts and others should find a place.

A solution would be the appointment by the Minister of a body of persons of the types mentioned, some of whom would be on a whole-time and others on a part-time basis. These appointments could be made with the advice of the Central Health Services Council and for convenience those appointed might be grouped in suitable panels operating over different areas of the country. The selection of the part-time doctors could be partly from those associated with consultant practice and voluntary hospitals and partly from those with experience of municipal hospitals, as in the case of those who are already conducting on the Minister's behalf the survey of hospital resources referred to in Appendix B. In cases of importance the inspectors could, again like the hospital surveyors, work in pairs.

The system of inspection must take account of the fact that the new joint authorities, no less than the Minister, will have a responsibility for the hospital service as a whole in their respective areas. The arrangements are intended to serve the double purpose. Inspectors' reports on any hospital will be available both to the Ministry and to the joint authority, and it will be open to the latter to ask for a special inspection if it thinks it desirable. Where in the past contractual arrangements have been made between a local authority and a voluntary hospital, special provision has not uncommonly been made for a right of entry for the authority's medical officer. There would be nothing to prevent similar arrangements being locally agreed under the system now proposed, but normally a more general system of the kind described will better serve the purpose in view.

Provision for consultant services in the local plan.

A main object of the new arrangements will be to ensure all kinds of consultant and specialist advice and treatment to all who need it. This part of the service will be best and most naturally based on the hospital services, in the wide sense in which these have been defined.

This means that it will become one of the duties of the joint authority to ensure that, through the various hospitals taking part, there will be provided an adequate consultant service available to all general practitioners in the service. It will do this, as in other branches of the hospital service, partly by its own direct arrangement and partly by contracting with the voluntary hospitals. In the latter case it will be for the authority to agree with a voluntary hospital for the provision by the latter of consultant services both at the hospital and—where necessary—by visits to a clinic or Health Centre or the patient's home. The hospital will itself enter into the necessary engagements with the consultants and specialists concerned. The local service payments to the hospitals, already mentioned, can be based on the assumption of a consultant staff properly remunerated to enable the hospital to fulfil the tasks which it has undertaken to perform.

Some principles affecting consultant services.

Before proposing in detail the form of a consultant service the Government are awaiting the report of Sir William Goodenough's Committee on Medical Schools. But it is clear that there are certain general considerations of which account must be taken in devising the new service.

The need is twofold—more consultants, and a better distribution of them. Apart from distribution, there are not yet enough men and women of real consultant status and one of the aims will be to encourage more doctors of the right type to enter this branch of medicine or surgery and to provide the means for their training. As to distribution, the need is for a more even spread. The main consultant facilities now are inevitably concentrated at the medical teaching centres. The consultant service still needs to be organised with the teaching centre as its focus, but the service must be spread over a wider area by enabling and encouraging consultants taking part in it to live and work farther afield. Apart from the main effect of greater accessibility to the public, this will also have a beneficial effect upon general medical practice over larger areas—where the habitual presence and services of consultants will serve as a means of continuous postgraduate education.

The consultant taking part in the service must be associated with his particular hospital or hospitals on a much more regular basis—and with more regular attendances and duties—than is often the case now, when he is regarded as merely "on call." It will often be desirable that the consultant's association should be with more than one major hospital, so as to enable the sharing of a common consultant staff to become an effective link between hospitals. The consultant's function will be normally one of regular and frequent visiting of these hospitals, both for in-patient and for out-patient consultation; also of properly arranged visiting of outlying "general practitioner" hospitals, which need to be linked with the major hospitals; and—for certain consultants as circumstances may require—of visiting Health Centres and clinics, and, in case of need, the patient's home, at the request of the general practitioner.

For this sort of duty the proper and regular remuneration of consultants, through the hospitals with which they are associated, will become essential. This remuneration, and the engagements entered into in respect of it, can be on either a full-time or a part-time basis (and might well include part-time engagements with more than one hospital). There will be no need to make either whole-time or part-time appointment a universal rule.

The conditions, including the financial terms, on which consultants undertake work on a whole-time or part-time basis will be a matter for arrangement by the hospitals, voluntary or municipal, which offer the appointments; but in order to avoid anomalies as between hospital and hospital and between area and area some central regulation of scales will be required.

Some degree of control of the discretion of individual hospital authorities will be required in appointments to senior clinical posts. Under existing practice a danger of "in-breeding" has been commonly recognised, and while it is important that the ultimate responsibility for an appointment should rest unmistakably with the body of persons conducting the hospital's affairs, it will be necessary to consider a system under which an expert advisory body recommends a number of suitable candidates from which the hospital authority makes the final choice. The necessary machinery could be organised in a variety of ways. It might consist of a number of advisory panels, working over regions based, broadly, on the medical teaching centres and representing both the consultant members of the profession and the medical teaching organisations. One or more representatives of the appointing hospital could join the panel dealing with the sifting of candidates for appointment.

V.

GENERAL PRACTITIONER SERVICE.

The arrangements for general medical practice in the comprehensive service—i.e. for ensuring a personal or family doctor for everybody—present the most difficult problem of all. This is partly because this will be the front-line of the service, the first source of help on which the individual will rely and one involving a close personal relation between doctor and patient. In addition, although the provision of medical benefit under National Health Insurance covers over twenty millions of persons and has afforded much experience of the working of a public general practitioner service, the widening of public responsibility to cover the whole population and the need to fit the general practitioner into a comprehensive service will create new problems and will make it necessary to reconsider, without preconception, the whole of the existing arrangements.

If the service is to be free to the people for whom it is provided, the doctors taking part in it will look to public funds for their remuneration. They must, therefore, be in some contractual relationship with public authority, which in turn must be able to attach such conditions as will ensure that the services which the people get are the services which they need (and for which they will be paying in taxation and otherwise) and that they can get them where and when they need them. The State must, therefore, take a greater part in future in regard to general medical practice.

The method of embodying general medical practice in a national service must observe two principles. The first, which mainly concerns the patient, is that people must be able to choose for themselves the doctor from whom they wish to seek their medical advice and treatment, and to change to another doctor if they so wish. Freedom of choice is not absolute now; it depends on the number and accessibility of doctors and on the fact that there is a limit to the load which any one doctor can or should take on. But the present degree of freedom must not be generally diminished, and the fact that public organisation ensures the service must not destroy the sense of choice and personal association which is at the heart of "family" doctoring. The second principle, which mainly concerns the doctor, is that the practice of medicine is an individual and personal art, impatient of regimentation. Whatever the organisation, the doctors taking part must remain free to direct their clinical knowledge and personal skill for the benefit of their patients in the way which they feel to be best.

Methods of approach to the problem.

One method would be to abandon entirely the present system, on which National Health Insurance has been based, and to substitute for it a system under which all doctors taking part would become the direct employees of the State or of local authorities and would be remunerated by salary. As a problem of administration, there would be no insuperable difficulty in organising a scheme of this kind. But this is a highly controversial question, on which opinions are sharply divided. Many experienced and skilled doctors would be unwilling to take part in a service so conceived. They would hold that it infringed the second of the two principles just stated, and that if they became the salaried servants whether of the State or of local authorities, they would lose their professional freedom and be fettered in the exercise of their individual skill. Other doctors, with an equal right to be heard, would welcome a salaried service, believing that it would relieve them from business anxieties and enable them to devote themselves more freely to the practice of their profession. Lay opinion is similarly varied.

The Government have approached the question solely from the point of view of what is needed to make the new service efficient. Some of the proposals made in this Paper involve forms of medical practice for which present methods of payment are inappropriate, if not unworkable. Where this is so, remuneration by salary or its equivalent is suggested. A universal change to a salaried system is not however, in the Government's view, necessary to the efficiency of the service. They consider that to make, unnecessarily, so total and abrupt a change in the customary form of general medical practice would offend against the principle—earlier stated—that the new service should be achieved not by tearing up all established arrangements and starting afresh but by evolving and adapting the present to suit the future. They are averse from imposing a total salaried service merely for the sake of administrative tidiness.

Another alternative would be to maintain the "panel" system of National Health Insurance as it is now known, while extending it to the whole population and expanding it to include consultant and specialist services. This system has had, and still has, its critics, and some of the criticism is well founded. Yet, for more than a generation it has provided a better medical service than was previously available to a large section of the population and it has enlisted the regular professional services of a great majority of the doctors of the country. There are, however, two overriding reasons why it will not be possible to meet the new need merely by extending the panel system in this way.

First, there is at present no effective means of ensuring a proper distribution of doctors. To some extent the demand in any area will, by affording opportunity for practice, itself induce the supply; but that does not work out reliably or universally. It is true even now that the need for doctors in one area may be scantily or unsuitably met, while that of another area may be over-supplied. Certainly when the much bigger public responsibility is assumed of ensuring a personal doctor service for the whole population there will have to be means of securing, through public organisation, that the resources available are so disposed as to fit the public need.

Second, there is a great deal of agreement in the profession and elsewhere that developments in the modern technique of medical practice point the way to changes which need encouragement and experiment in any future service. The recent draft Interim Report of the Medical Planning Commission

(organised by the British Medical Association) summarises these trends very well. For instance, the Report states:—

“ The days when a doctor armed only with his stethoscope and his drugs could offer a fairly complete medical service are gone. He cannot now be all-sufficient. For efficient work he must have at his disposal modern facilities for diagnosis and treatment, and often these cannot be provided by a private individual or installed in a private surgery. He must also have easy and convenient access to consultant and specialist opinion, whether at hospital or elsewhere, and he must have opportunities of real collaboration with consultants. Facilities such as these are inadequate at the present time. There must also be close collaboration amongst local general practitioners themselves, for their different interests and experience can be of value to each other. Although this need is recognised by practitioners collaboration has not been developed as it should be.”

Or, again, in another passage—

“ At the present time the single-handed practice or partnership is usually conducted from a doctor's private residence. Certain rooms are used for professional purposes, and personal or borrowed capital is invested in equipping the practice with apparatus and in keeping it up-to-date; additional domestic staff is employed to keep the surgery and waiting rooms clean and to deal with callers; the secretarial work and record keeping are done by the doctor himself or a secretary employed for the purpose; dispensing, if done at the surgery, is undertaken either by the doctor or a dispenser employed by him. This arrangement is repeated many times over in a fairly well-populated district.”

The tendency will be away from the idea of the all-sufficient doctor working alone, and towards a bigger element of grouped practice and teamwork—in which the individual doctor retains his personal link with the patient, but has at his side the pooled ability of a group of colleagues as well as consultant and hospital services behind him. To quote the Medical Planning Commission once more:—

“ Diverse as are the views of the organization of medical services, there is general agreement that co-operation amongst individual general practitioners in a locality is essential to efficient practice under modern conditions, though views vary on the form of the co-operation. The principle of the organization of general practice on a group or co-operative basis is widely approved.”

The Government fully agree that “ grouped ” practices, to which numerous privately arranged partnerships are already pointing the way, must have a high place in the planning of the new service and they are designing the service with this constantly in view. Yet the conception of grouped practices cannot represent the whole shape of the future service. In the first place, there has not yet been enough experience of the idea translated into fact. Not enough has been found out, by trial and error, to determine the conditions under which individual doctors can best collaborate or even the extent to which in the long run the public will prefer the group system. Second, it is certain that the system could not be adopted everywhere simultaneously. The change, if experience shows that it should be complete, will take time.

The Government intend, therefore, that the new service shall be based on a combination of grouped practice and of separate practice side by side. They propose to place the group idea in the forefront of their plans in order that there may be a full trial on a large scale of the working of arrangements of this kind. Grouped practices are more likely to be found suitable in densely populated and highly built-up areas and it is there particularly (though not exclusively) that they should first be tried. It will then be possible to watch

the development, with the medical profession, and to decide in the light of experience how far and how fast a change over to the new form of practice can and should be made.

The part of central and of local organisation in the service.

All doctors in general practice who join in the new relationship with their patients, and rely largely in future on public funds for their normal livelihood, must be treated on a similar footing; the terms of their remuneration, the general conditions to be observed by them and the rights to be enjoyed by them must be nationally negotiated and settled.

In the National Health Insurance scheme successive Governments have accepted this principle, on which the medical profession itself has laid much stress. Although the local Insurance Committees play a valuable and recognised part in the administration of the scheme (and particularly in handling minor matters of discipline) the service is in fact highly centralised. Terms are laid down in great detail in the Medical Benefit Regulations, and all major questions have either been matters for negotiation between the Government and representatives of the profession or—as in the case of enquiries involving the removal of a doctor from the service—have been dealt with by central tribunals appointed by, and answerable to, the Minister.

The Government are convinced that, broadly, this system is still the right one and that it would be a mistake to apply to the new general practitioner service the normal canons of local government administration. On the other hand, it is essential that general medical practice in the new health service should not be divorced from the other branches of that service; that would perpetuate what is recognised to be the outstanding defect of the present system. Therefore what is proposed, in outline, is as follows:—

(1) The present practice of settling centrally all major terms and conditions of service, including remuneration, will stand. The local Insurance Committees will be abolished and in future doctors, in so far as they take part in the new general practitioner service, will be in contractual relation with a Central Medical Board, to which they will look for their remuneration.

(2) In general, the other functions of the Insurance Committees will also fall to the Board, but to avoid over-centralisation in detail the Board will discharge many of the minor day-to-day functions through a local committee or similar agency, on which there will be included members of the local authority in each area.

(3) The new joint authority will have an important part to play of a different kind. As the general planning authority for the whole health service in its area, it will include the needs of general medical practice, no less than of other services, in its area plan; it will provide for the linking of general practitioners (whether in grouped or separate practices) with the hospital and consultant and other services in the area.

(4) The county and county borough councils which make up the joint authority will normally each have the function of providing and maintaining such premises (in Health Centres and otherwise) as are approved in the area plan.

(5) The doctor himself will, in his contract with the Board, be required to observe the arrangements of the area plan and will be given all the necessary information and facilities to enable him to do this.

These are all matters for further explanation. The arrangement adopted is, first, to deal with the particular points arising on "grouped" general practice and on "separate" general practice respectively, and then to deal with features common to both kinds of practice and with the constitution and functions of the proposed Central Medical Board.

GROUPED GENERAL PRACTICE.

The conception of grouped practice finds its most usual expression in the idea, advocated by the Medical Planning Commission and others, of conducting practice in specially designed and equipped premises where the group can collaborate and share up-to-date resources—the idea of the “Health Centre”. The Government agree that it is in this form that the advantages of the group system can be most fully realised, though it will also be desirable to encourage the idea of grouped practice without special premises. They intend, therefore, to design the new service so as to give scope to a full trial of this new method of organising medical practice, and so as to enable it to be expanded and developed as time goes on to the maximum extent which the practical experience of its working is found to justify.

General lines of Health Centre development.

Where Health Centres are set up, their types will need, particularly at first, to be varied. Scope must be given (with central and local professional guidance) to experiment and to design capable of later adaptation. Broadly, the design should provide for individual consulting-rooms, for reception and waiting-rooms, for simple laboratory work, for nursing and secretarial staff, telephone services and other accessories, as well as—in varying degree according to circumstances—recovery and rest rooms, dark rooms, facilities for minor surgery, and other ancillaries. The object will be to provide the doctors with first-class premises and equipment and assistance and so give them the best facilities for meeting their patients' needs. The doctors will thus be freed from the necessity to provide these things at their own cost. They will join in something like the partnership groups already often privately formed, and there will be new scope for the young doctor, fresh from hospital training, to take his share in the Centre as an assistant to the practitioners engaged there, and then, later on, to be eligible for full participation.

Limitation of the permitted number of patients will apply whether in the Centre or outside it, and the ordinary basis of the patient's choice of doctor will not be affected. Each Centre will need to be so planned as to be regarded by patients not as a complete break with present habit but as a new place at which they can, if they wish, continue to see their own doctor when he has joined the Centre, or can choose the doctor in the Centre whom they want to attend them. Alternatively, they must be able, if they prefer it, simply to select a Health Centre as such, rather than choose a particular doctor at the Centre; and then arrangements will be made by the Centre to ensure that they obtain all the proper advice and treatment which they need.

There has often been misconception as to the precise implications of Health Centre practice. It has been assumed that a doctor would be “on duty” only for stated periods and that, outside those periods, his patients would always be attended by some other doctor. That need not be so. Normally, a doctor will attend his own patients as necessary, either at the Centre or at the home. He will have his consulting hours and visit his patients as at present. But the grouping of practices at a Centre will make possible a greater fluidity of arrangements; for example, as arrangements will be made for continuous staffing, a patient will, in emergency, get immediate attention even though his own doctor does not happen to be available. The grouping of practices will, moreover, make it easier for doctors to obtain reasonable holidays and to attend refresher courses. The internal organisation of the Centre so as to facilitate reasonable absences consistent with the doctor's responsibilities will be a matter for the doctors themselves.

The Centres will be provided first in selected areas. Both central and local organisation, and local professional interests represented by the Local

Health Services Council, will all have their part to play in this provision. The wish of the local doctors to bring their work into the new Centres must obviously be a big factor in a decision to provide a Centre, but in the last resort the decision will rest on the requirements of the public interest.

Provision of Centres.

It will be essential to associate any decision to provide Centres, and their location, with the rest of the arrangements of the approved area plan. This will mean, in effect, that the decision in each case that the Health Centre system should be initiated in a particular part or parts of the area, and the consequential decisions as to the location, and size and kind of Centres to be provided, will normally start in the area itself where the needs are best known and where the general health services plan is formulated, but will depend in the last resort upon the decision of the Minister in the light of his central policy on the general practitioner service and the new Health Centre experiment in the country as a whole. It will be for the joint authority in the first instance, in consultation with the local medical profession, to formulate proposals for a Centre or Centres as part of the area plan—or, later on, as an extension or alteration of that plan—and to submit them to the Minister.

The actual provision of a Centre will normally be the responsibility of the county or county borough council. This accords with the principle earlier discussed under which the clinic and other services which are not essentially part of the consultant and hospital field will be allocated to these councils and not to the joint authority.

Terms of service in Health Centres.

The terms and conditions of service will be settled centrally for all doctors taking part in the new service, whether in group practice or not, and all doctors will enter into a contract of service with the central organisation. The doctor practising in a Centre will not be debarred from private practice outside it, for those patients who do not wish to take advantage of the new public service, though there will be provision to ensure that the interests of patients within the new service do not suffer in any way as a result of this.

In certain respects the contract of the doctor in the Health Centre must differ from that of one practising outside. After the establishment of a Centre the appointment of a new doctor to the Centre will be made jointly by the Central Medical Board and the council administering the Centre, and similarly the termination of his engagement at the Centre (except where the doctor himself wishes to bring it to an end) will rest with these two bodies, or if they fail to agree, with the Minister. It will be part of the arrangement that the council provide the doctors in the Centre with the necessary premises, equipment and ancillary staff. The contract will have to be a three-party one between the doctor, the Central Medical Board and the council.

But there is one important question in regard to the method of remuneration of the doctor, when practising in co-operation with a group of colleagues in a Health Centre, which does not arise in the same way when he is in separate practice outside. That is the method of payment of the individual doctor.

It seems fundamental that inside a Centre the grouped doctors should not be in financial competition for patients. All the practical advantages of the Centre—the use of nursing and secretarial staff, record-keeping, equipment, the availability of young assistant doctors in particular—will be, under a system of a salaried team, at the disposal of the group in whatever way they like collectively to arrange; it is the whole idea that they should arrange their own affairs together in this way. But if individual remuneration is based on mutual competition for patients, complication will enter into any attempt of the group to allocate and share these services—for the more any

one individual is able to draw on the ancillary helps of the Centre (and particularly on medical assistants) the more he will gain and his fellows lose in the contest for patient lists.

There is therefore a strong case for basing future practice in a Health Centre on a salaried remuneration or on some similar alternative which will not involve mutual competition within the Centre. When the salaried or similar principle is adopted, the scales will have to be decided in consultation with the profession itself. In this respect attention is drawn to Appendix D, which suggests the method by which a basis could be arrived at for settling both salaried remuneration and the payment by capitation later proposed for "separate" practice. It may also be possible, if desired by the doctors themselves, to offer remuneration on a salaried basis or on some other basis than that of capitation fees to doctors engaged in group practice even where the practice is not conducted in a Health Centre.

SEPARATE GENERAL PRACTICE.

In "separate" practice the general framework of the National Health Insurance scheme will be retained but there will have to be important changes from the past and the scheme will have to be much extended and adapted. The nature of these changes will be evident not only from the following paragraphs which relate to "separate" practice, but also from the later paragraphs dealing with features common to both "group" and "separate" practice.

Scope of Separate Practice.

In future everyone will be entitled, as only "insured" persons are entitled at present, to receive from the doctor chosen by him all the ordinary range of general medical practice, either at the consulting room or at his home, as the case requires. He will also be entitled, normally through his doctor, to all the new range of consultant and specialist and hospital or clinic services already considered.

A doctor in separate practice will engage himself to provide ordinary medical care and treatment to all persons and families accepted by him under the new arrangements. He will work from his own consulting-room and with his own equipment, as he does now, but he will be backed by the new organised service of consultants, specialists, hospitals and clinics, which he will be expected to use for his patients in accordance with the approved area plan earlier described. He will receive his remuneration for work within the new service, not from the individual patient, but from public funds; and this remuneration will be based—as it is now in National Health Insurance—on a capitation system, depending on the number of patients whose care he undertakes. (A settlement on new lines of the basis for calculating capitation or other forms of remuneration is suggested in Appendix D already referred to.) Even in the case of separate practice there will be some circumstances in which it will be possible to remunerate the practitioner on a salaried or similar basis if he so desires. Opportunity for such an arrangement may occur, for example, in sparsely populated areas where a single doctor is in fact responsible for all the work of the area and is not therefore in competition with other doctors in the neighbourhood. But, however remunerated, the doctors in separate practice will remain entitled to engage in private practice, since it is no part of the intention of the new service to prevent persons who prefer to do so from making private arrangements for medical care or to prevent doctors from meeting their needs.

Control over entry into new practice.

There will be no interference with the right of a doctor to go on practising where he is now and to take part in the public service in that area.

But an unrestricted right to any doctor to enter any new practice and there to claim public remuneration, at his own discretion, would make it impossible to fulfil the new undertaking to assure a service for all.

Under the present National Health Insurance system every qualified doctor has a right to take up panel practice where he likes. The system enables the Minister, if satisfied that the service in any area is inadequate, to replace the panel system by some other form of arrangements, although—with minor exceptions at the outset of the scheme—this power has not been invoked. There has never been any real means of securing that the doctors of the country are reasonably distributed. This has perhaps not been a pressing necessity while the scheme covered less than half the population, but it is well-known that great disparities have existed.

If under the new scheme the whole population are to be entitled to a general practitioner service, a much heavier responsibility will be thrown on the Government to see that the needs of the whole population are met. This implies some degree of regulation of the distribution of medical resources, at least to the extent of securing that a doctor does not in future take up practice in the public service (whether by purchasing a practice or by "squatting"), in a locality which is already fully or over-manned. Such control can be left in the profession's own hands as far as possible, though it must be guided by national policy. A suitable machinery will be to vest it in the Central Medical Board, working under general guidance on policy from the Government but independently in its individual decisions. Any practitioner wishing to set up a new—or take over an existing—public service practice in a particular area will seek the consent of the Board. The Board will then have regard to the need for doctors in the public service in that area, in relation to the country as a whole, and to the general policy for the time being affecting the distribution of public medical practice. If it is considered that the area has sufficient or more than sufficient doctors in public practice while other areas need more doctors, consent will be refused. Otherwise it will usually be given without question. The Board will thus be able to help the new joint authorities which, in their general concern with the health services of their area, will turn to the Board to encourage or discourage any further increases in general practice in the area.

The part of the new joint authority.

It will be the duty of the new joint authority to consider the needs of its area in general medical practice, including "separate" practice, no less than in the other branches of the comprehensive service, and to include in the area plan for central approval the arrangements—in terms of numbers and distribution of general practitioners—which it considers to be necessary to meet these needs. In this it will have the advantage of consultation with the Local Health Services Council. The plan will need the Minister's approval, after hearing any conflicting local views. The approved plan will be made known to the Central Medical Board, to be taken into account in the subsequent exercise of their functions in the distribution of public medical practice.

It will also be the duty of the joint authority to watch that the supply of all branches of the comprehensive service is adequate to the needs of their area and in the matter of general practice, therefore, to bring to the notice of the Minister and the Central Medical Board any needs which they feel should be more adequately met. They will also be responsible for ensuring that all the other services in their area (hospital, clinic, nursing, consultant and specialist) are fully known to the general practitioners participating in the new service and that the latter are enabled (as their contract will require them) to use these services fully for their patients in accordance with the approved area plan.

GENERAL.

It remains to consider certain general questions affecting medical practice, both "grouped" and "separate", and to describe more fully the proposals for a Central Medical Board.

Permitted number of patients.

From the outset of medical benefit under National Health Insurance, provision has been made for imposing a limit on the number of insured persons for whose treatment a doctor may make himself responsible. The limit is fixed by a local scheme which is subject to the Minister's approval, but the regulations themselves provide for certain over-all maxima. An additional number of patients is permitted to a doctor who employs one or more assistants. Under this system every doctor has a right to undertake as much private practice as he desires and is able to secure, and it is usual for the doctor of an insured head of a family to look after the uninsured wife and children under private arrangements.

In the new service also there will have to be prescribed limits to the number of patients whose care any one doctor can properly undertake. But the situation will be substantially altered, by a scheme which covers the whole population and which contemplates both grouped and separate practice. It is not the wish of the Government to debar anyone who prefers not to avail himself of the public service from obtaining treatment privately, nor to prohibit a doctor in the public service from carrying on any private practice, but it will be necessary to ensure that the interests of the patients in the public service do not suffer thereby.

In fixing the appropriate limits, in future, allowance will need to be made for private practice remaining after the new service is in operation. There will need to be room for flexibility. A doctor entirely free from outside activity and able to give his whole time to general practitioner work in the new service will need to be able to work to a higher permitted limit of public patients. A doctor with an unusually large amount of private work, or with appointments in other branches of the public service, will be expected to work to a lower permitted limit. The effective way to provide reasonable flexibility is to entrust the decision in such cases to a suitable professional organisation—which will naturally be the Central Medical Board working through its local committees. The details of this are for discussion with the profession's representatives at a later stage, but the object must be to see that the care of patients under public arrangements does not suffer in quality or quantity by reason either of private commitments or other public engagements. Nor must anyone have reason to believe that he can obtain more skilled treatment by obtaining it privately than by seeking it within the new service.

Entry into the public service.

There is a strong case for requiring all young doctors, leaving hospital and entering individual practice for the first time, to go through a short period of "apprenticeship" as assistants to more experienced practitioners. There is a particularly strong case for saying that this should be required by the State in medical practice remunerated from public funds. When such a rule is made the young assistant doctor will have to be assured of reasonable conditions and opportunity, and certainly must not be at risk of being precluded from a proper professional livelihood by the operation of the rule. One way will be to require a suitable period as an assistant except where the Central Medical Board dispenses from the rule (e.g. to meet cases where an assistant post is not reasonably obtainable). There will, no doubt, be many opportunities to

employ assistants in Health Centres where terms and conditions can be regulated and the Board can help new entrants to find vacancies. In "separate" practices, the Board must be empowered to satisfy itself as to the proposed arrangements and remuneration for an assistant, before consenting to his engagement by the principal seeking him—guidance on standards being given centrally in consultation with the profession. The general practitioner wishing to undertake a larger number of public patients than the ordinary maximum will inform the Board, and the Board—after satisfying itself as above—will help an intending assistant to get the post on the terms approved. The Board must also be able to require the young doctor during the early years of his career to give his full-time to the public service where the needs of the service require this.

Compensation and superannuation.

The Government recognise that the adoption of the proposals in this Paper will, in certain cases, destroy the value of existing practices. In such cases compensation will be paid. It will be necessary to discuss this in detail with the profession but there are two classes of case in which a just claim for compensation will clearly arise.

The first is that of a practice in an "over-doctored" area, to the sale of which the Board refuses consent. Here the out-going doctor or his representatives will be paid compensation.

The second is that of a doctor who gives up his "separate" public practice and takes service in a Health Centre. It will be incompatible with the conception of a Health Centre that individual practices within the Centre should be bought and sold and a doctor will therefore, by entering a Centre, exchange a practice having a realisable value for a practice which he will be debarred from selling. On the other hand an efficient superannuation system will be an essential part of the Health Centre organisation. A doctor entering a Centre will acquire superannuation rights and other facilities of considerable value. The proper course will be to strike a fair balance between what he is gaining and losing and to compensate him accordingly.

It would be more difficult to institute superannuation for doctors in "separate" practices, but the Government will discuss with the profession the possibility of an acceptable scheme to provide for retirement within specified age limits and for superannuation on a contributory basis.

Sale and purchase of public practices.

The Government have not overlooked the case which can be made for the total abolition of the sale and purchase of publicly remunerated practices. The abolition would, however, involve great practical difficulty and is not essential to the working of the new service now proposed. The Government intend, however, to discuss the whole question with the profession, to see if some workable and satisfactory solution can be reached. In particular, it would obviously be incongruous that the new public service should itself have the effect of increasing the capital value of an individual practice and thus increasing the amount of compensation which may have to be provided under the circumstances described in the preceding paragraphs; and measures to prevent this, must be included in the discussion.

The creation of Health Centres will, meanwhile, do a great deal to limit the scope of the present system. The Centres will afford a wide opportunity to young doctors to enter their profession without financial burdens. They will also, wherever they are set up, bring into being a new form of practice which

will thereafter be entirely free from any necessity of sale and purchase. Moreover, the system proposed earlier of requiring young men who join the public service normally to undergo a period as assistants will go far to avoid the danger of a doctor purchasing a practice which he has not the necessary experience to handle successfully.

Creation of a Central Medical Board.

It is intended to create from the profession itself a special executive body at the centre, which will undertake some of the administrative work of the service requiring a specially intimate link with the profession.

As the contract of the doctor will be in a public service, remunerated from public funds, the Board will clearly have to be subject to the general directions of the Minister, but subject to those general directions it will be the organisation with which the doctor will deal as the "employer" element in the service—i.e., the organisation with which he will be in contract, whether engaged in "separate" or in grouped or Health Centre practice (although in Health Centre practice the local authority will be joined in the contract).

It is not for this Paper to suggest all the details of the doctor's contract at this stage (they will be for discussion with the profession's representatives); but they will need to provide—

(a) for the doctor to give all normal professional advice and services within his proper competence to those whose care he undertakes;

(b) for him to comply with the approved area plan for obtaining consultant and specialist and hospital services;

(c) for proper machinery for the hearing of complaints by patients and for the general kind of disciplinary and appeal procedure already familiar in National Health Insurance;

(d) for the observance of reasonable conditions, centrally determined with the profession, respecting certification and other matters which must arise in any publicly organised service.

The existing doctor will enter into the new contract in respect of his existing practice; the new doctor, or doctor entering a new practice, will first obtain the Board's consent (as already suggested) and then enter into the necessary contract in respect of his new practice. Termination of the contract will ordinarily be either by the doctor, at any time after due notice, or by the Board, under conditions which will no doubt be substantially similar to those now obtaining under National Health Insurance, with such special extra provisions as may be necessary in the case of Health Centre practice.

Under these arrangements there will be no need for the continuance of the present local Insurance Committees of the National Health Insurance scheme, and these Committees will be abolished. The minor day-to-day functions now exercised by Insurance Committees (so far as these still arise under the new and wider service) can be handled by a local Committee of the Board in each area, on which local authority members will be included.

The Board will also watch over the distribution of public medical practice generally. In "separate" practice it will do this through the arrangements already described, under which its consent will be required before a vacant public practice is refilled or a new public practice established. In Health Centre practice it will be the agency through which any additional doctors required in future are introduced into any particular Centre, after suitable consultation with the doctors already working there, through the local

committees earlier proposed in place of the present Insurance Committees. It will be the agency through which young doctors obtain appointments as assistants at Health Centres and by which the terms and conditions of assistants in "separate" practice are protected in the way already proposed—and from which any dispensation from the requirement of an initial "apprenticeship" for new doctors will have to be sought.

The Board will also take on many functions on the doctor's behalf—e.g. in approaching the appropriate medical schools and hospitals with a view to the arrangement of post-graduate and refresher courses for those in general practice, in acting as the general centre of advice and help in the movement of doctors within the public service and in the various personal problems and requests for information which will doubtless arise. It will, with the Minister, provide the central organisation to which the new joint authorities will make known their area's needs in general practice, in accordance with the approved area plans for the health service as a whole.

The Board will be a small body, under a regular chairman—a few of its members being full-time and the rest part-time. It will be mainly professional, but it will also have lay members on its strength. In view of the wide scope of its executive functions and handling of public funds its membership and organisation will have to be finally settled by the Minister, although of course in consultation with the profession.

Supply of drugs and medical appliances.

The existing system under National Health Insurance, under which panels of chemists are formed in each area on lines closely corresponding to the panels of doctors, has worked on the whole with success. In detail the system is no doubt capable of improvement, and discussion with the appropriate pharmaceutical bodies will be welcomed by the Government. In particular, it will be necessary to consider the arrangements to be made in connection with the supply of drugs to patients attending Health Centres.

As regards medical and surgical appliances, the existing system entitles an insured person to the supply, free of charge, of certain appliances specified in the Medical Benefit Regulations if ordered by a doctor. These "prescribed appliances" are, in the main, the articles most commonly required in general practice. In a service which includes treatment of all kinds, whether in or out of hospital, the range of necessary appliances will have to be greatly extended; but it will be a matter for consideration whether in the case of the more expensive appliances the patient himself should not be called upon, if his financial resources permit, to contribute towards the cost—either of the appliances initially ordered, or at least of repairs and replacements. The point will be of particular importance in connection with the dental and ophthalmic services.

The need for a new attitude in patient and doctor.

The aim of the service will be to provide every person, or better still every family, with a personal or family practitioner who will be able to become familiar with the circumstances of those in his care—in the home and at work. It is to be hoped that doctor and patient will not wait always till the latter falls ill and urgently requires treatment. The doctor must try, in short, to become the general adviser in all matters concerned with health (no less than with disease) on which a doctor is so well qualified to advise. This means a changed outlook in much of present medical practice—a change that has long been wanted and advocated by most doctors themselves and for which they more than anyone have desired the opportunity. But such a change cannot be effected overnight. It will be helped if a new trend can be given to undergraduate medical education

and, fortunately, there are plenty of signs that medical schools are beginning to realise the importance of this. It will take time to develop; but it is worth stating clearly at the outset that, unless this kind of medical care is ultimately provided for every person and every family, the medical profession will not be giving the public the full service which it needs and which only the medical profession can give. To provide or to extend a service which considers only the treatment of the sick is neither in accordance with the modern conception of what a doctor should be trained to do nor in keeping with the general desire that the family practitioner should begin to undertake many of the duties at present performed by his colleagues in the public health service.

VI.

CLINIC AND OTHER SERVICES.

Apart from the hospital and consultant and family doctor services, the comprehensive health service must include arrangements for home nursing and midwifery and health visiting and the various kinds of local clinic and similar services which have either been provided in the past under special statutory powers or will have to be established in the future.

When the new service is established, these local services will not be provided as entirely separate entities, but rather as parts of the one new general duty to secure a whole provision for health. It will be the duty of the new joint authority—by means of the arrangements proposed by it and approved by the Minister in the general area plan—to ensure that all these different activities are properly related to each other, to the personal or family doctor service and to the hospitals and consultants, and that they are arranged in the right way and in the right places to meet the area's needs. This done, it will be the duty either of the joint authority or of the separate county and county borough authorities which together constitute it, as the case may be, to provide and maintain the various services on the lines of the settled area plan. The usual sharing of responsibility in this respect between the joint authority and the several counties and county boroughs—under the proposals described earlier in this Paper—will be recalled.

When these local services are arranged and regarded as parts of the one planned service of the wider area, there will be room for experiment and innovation in the way they are provided—particularly as time goes on and the full service gets into its stride. It is reasonable to look forward to the time when the general medical practitioner, the personal doctor with whom the individual and the family are regularly associated, will be able to be connected more closely with the services which are performed at special clinics—e.g. for child welfare, in which there is no doubt that in much of the general care of the young child and the handling of many of its day-to-day problems the clinics and the family doctor who has the general medical care of the child must be enabled to work in better contact for their common purpose. To make this possible on any substantial scale there will have to be much more opportunity than there is now for the family doctor to acquire special experience in the children's wards of hospitals and in general child welfare subjects and the chance of post-graduate training and refresher work in these and other special subjects. Where grouped general practice in Health Centres is tried there will be special opportunity for this kind of development.

But whatever developments there may be in the clinics or other services locally provided, or in the method of operating them in relation to other branches of the service as a whole, it is clear that the coming into operation

of the new service will certainly not involve closing down or abandoning any existing facilities—but much rather increasing and strengthening them to fit the new and wider objects in view. Therefore the effect of the proposals in this Paper on the main local services of this kind as they are known now—and on the position of the local authorities responsible for them—can be summarised.

Maternity and child welfare services.

The arrangement of lying-in accommodation in hospital or maternity home—indeed all the institutional provision for maternity, both for normal and for complicated cases—will become simply one part of the re-organised hospital and consultant services and will be the responsibility of the new joint authority. The ordinary functions of the maternity and child welfare clinics, however—concerned, as they are, not primarily with direct medical treatment but more with the convenient local provision of general advice and care in the day-to-day bringing-up of young children and in the mothers' associated problems—will not be transferred to the new joint authority but will lie wherever the related functions of child education are made by Parliament to lie under the new Education Bill. Under the proposals in that Bill, as they stand now, this will mean that the county and county borough councils will be the authorities primarily responsible, but that arrangements will be made in suitable cases for delegating much of the practical care of the service to some of the existing authorities, within the counties, which have hitherto carried the responsibility and which have accumulated good experience and local interest.

The maternity and child welfare clinics, although provided and maintained in this special way over the various parts of the joint authority's area to meet the need for the link with education, will be as much a subject as any other part of the health service for the general plan for that area which the joint authority will prepare and the Minister finally settle. The sufficiency of the clinics, their distribution, their connection with the necessary specialist services and the hospitals, and the other main arrangements concerned, will all be covered by the wider area plan.

What has been said of the clinics applies equally to those arrangements for domiciliary midwives and health visitors which need to be ancillary to the clinics' work, and responsibility for those will lie with the same authorities and be similarly affected by the general area plan.

School Medical Service.

In this service also the proposals need to be related to the proposals in the current Education Bill. The conception underlying both the Bill and the present Paper is that the education authorities will retain as part of their educational machinery the functions of inspection of children in the school group (the supervision, in fact, of the state of health in which the child attends school and of the effects of school life and activities on the child's health), together with the important function of using the influence of the school and the teacher and the whole school relationship with child and parent to encourage the recourse of the child to all desirable medical treatment. But, as from the time when the new health service is able to take over its comprehensive care of health, the child will look for its treatment to the organisation which that service provides—and the education authority, as such, will give up responsibility for medical treatment.

Tuberculosis dispensaries and other infectious disease work.

The local tuberculosis dispensaries will in future be regarded as out-patient centres of the hospital and consultant service, and responsibility

- for them will normally rest directly with the joint authority dealing with the whole of this aspect of the new service over its wide area. Just as it will be the aim to enable the main sanatorium and hospital treatment of tuberculosis to be more fully related in future to other specialist aspects of the diagnosis and care of diseases of the respiratory tract generally and of orthopaedic conditions, so it will also be essential to develop the local tuberculosis dispensaries as specialist out-post centres of the same service, where the physician has charge of—and direct access to—hospital and sanatorium beds and where the same consultants cover both in-patient and out-patient activity. The physician in charge needs particularly to concern himself also with the social and home conditions of his patients in tuberculosis, but it is not proposed that such activities as the securing of appropriate housing for the tuberculous shall pass with the dispensaries to the new joint authority. In such matters the physician in charge must look to the local authority normally concerned with these things.

All isolation hospital responsibilities will similarly pass, under the proposals earlier explained, to the new joint authority as part of the general hospital problem of its area. But there will remain a field of day-to-day epidemiological work—many of the measures dealing with the notification of the diseases, the local control of the spread of infection, and environmental factors affecting this, which are the subject of statutory powers under the Public Health Acts already—which can still be suitably carried out locally in the different parts of the joint authority's area, although it will probably be found that most of these activities should in future be centred in the county and county borough councils rather than distributed more widely, as they are now, over the districts of the minor authorities.

- In epidemiology in its wider sense there will be some activities which must be organised on a full national basis, rather than locally, and here the valuable experience of the Emergency Public Health Laboratories will be a pointer to future development.

Cancer diagnostic centres.

Responsibility for the local centres of diagnosis and advice which were contemplated when the Cancer Act of 1939 was passed, and which have had little chance to develop substantially during the war, will pass with the other responsibilities of that Act to the new joint authorities as a part of the general hospital and consultant service.

Mental clinics.

Local mental clinics are essentially an out-patient activity of the hospital and consultant service—like the tuberculosis dispensaries—and responsibility for these clinics will therefore belong to the new joint authority in its general care of mental health.

Venereal diseases.

The allocation of the present service for venereal diseases between the county and county borough councils and the new joint authority presents peculiar difficulty. In one sense it is essentially a clinic service which can continue to be locally organised within the framework of the new area plan, and which—it is arguable—need not be regarded as essentially part of the wider hospital and consultant field. The newly developing use—started during the war—of the help of individual general practitioners to supplement the work of the clinics lends some point to this. On the other hand it is a service requiring a high degree of specialisation in future, and it is as a matter of convenience one which

is usually attached to hospital premises; these are factors which point to associating it directly with the re-organised hospital service. It is something of a "border-line" case, in fact, and will be best left to the settlement of the area plan in each case to determine.

New services likely to develop.

A full home nursing service must be one of the aims of the new re-organisation. How far it needs to be directly provided by public authority, or indirectly by public arrangements made with other bodies, or both, will be matters for discussion. Its object must be to ensure that all who need nursing attention in their own homes will be able to obtain it without charge. Responsibility for securing this will normally be exercised by the individual county and county borough councils within the general area plan.

The fact that there must be delay in reaching a stage at which general dental and ophthalmic services can be provided for all has been referred to earlier in the Paper. Nevertheless, nothing less must be the object in view and the best ways and means will need to be discussed in detail with the dentists and doctors and others concerned. For some time dental care, at least, will have to be concentrated on the present priority classes—and particularly on the children and adolescents. These are matters on which, so far as dentistry is concerned, the views of the Teviot Committee, already referred to, will have a valuable bearing and must be awaited. But it is clear that one of the main calls at first will be on the clinics and similar services for the pre-school and school child.

The new service of the Health Centre for general medical practice has already been considered, and when it comes into operation it will normally be the county or county borough council's function to provide and maintain the Centres.

Medical research.

A valuable part of the medical research carried on in this country is conducted in the hospitals, and in close association with the day-to-day work of the hospitals. It has been the policy of the Medical Research Council—the body set up under Royal Charter and under the auspices of the Committee of the Privy Council for Medical Research to guide and stimulate and co-ordinate research—to encourage this work in the hospitals themselves and to assist it financially. Generally, it is felt that this is a more fruitful method of securing valuable results than the alternative method of multiplying special State institutions for the purpose, and it is of first importance that it should continue and develop, both in the municipal and in the voluntary hospitals and institutions. It does not appear to require any new express authority, and the powers of local authorities under statute and of voluntary hospitals under charters or trust deeds or other instruments seem to be already sufficient.

The Part of Medical Officers of Health and others.

Whatever changes there may be in the scope of the health services locally provided and in the local organisation for providing them, it is clear that there will be an even more important part in the future than there has been in the past for social medicine and the medical organisation of public health. The new service will make great calls upon all those medical men and women already engaged in the work of local health authorities, and upon all those who assist in the ancillary services now; just as it will give new scope and better opportunity not only to those already engaged but to newcomers to this branch of professional life.

VII.

THE SERVICE IN SCOTLAND.

What has already been said with regard to the present state of the health and medical services, the chief deficiencies in the existing arrangements, and the general shape of a comprehensive service which would make good these deficiencies applies equally to Scotland as to England and Wales.

The general administrative structure of the service in the two countries, however, cannot for various reasons be the same. The development of the health services has not been entirely uniform up to the present time; here and there differences occur in the scope and organisation of corresponding services; and each country has services for which there is no counterpart in the other. The most important of these differences are described in Appendix A. The reason why the new service, although the same in scope and objects in both countries, cannot be organised on entirely similar lines is that account must be taken of certain differences of geography and local government structure in Scotland, as compared with England and Wales. For example about 80 per cent. of Scotland's population is concentrated in about 17 per cent. of the total area of the country, across its industrial "waist." Outside the industrial belt are large and for the most part sparsely populated areas. Of the 55 existing health authorities in Scotland only 10 have populations of more than 100,000 and 32 have a population under 50,000. Against this, the population of England and Wales is on the whole much more urbanised and the local government units are larger with correspondingly greater resources.

CENTRAL ADMINISTRATION.

There will be no substantial difference in the central machinery to be set up in Scotland as compared with England and Wales.

The Secretary of State will be directly responsible to Parliament for the administration of the new service and will exercise his functions through the Department of Health for Scotland.

A Central Health Services Council for Scotland will be set up by statute with the same kind of constitution, powers and functions as the corresponding Council in England and Wales. It will consist of representatives of the medical, dental, pharmaceutical and nursing and midwifery professions and of the voluntary and municipal hospital authorities in Scotland, appointed by the Secretary of State after consultation with the organisations represented, and the Council will select its own chairman. It will advise the Secretary of State on any technical aspect of the service, either in response to a request for advice from the Secretary of State or on its own initiative, and the Secretary of State will be required to submit to Parliament annually a report on the Council's work during each year.

Similarly, Scotland will have a separate Central Medical Board to act on behalf of the Secretary of State in the day-to-day administration of the general practitioner service. This Board will perform the same functions as the corresponding English organisation described in chapter V, and like that organisation it will be created mainly from the medical profession itself. There will clearly have to be the closest liaison between the two Boards to secure uniform administration of the general practitioner service in the two countries, and special arrangements will have to be made, by a common list of doctors and in other ways, to deal with the movement of doctors from one country to the other.

LOCAL ORGANISATION.

It is in the local organisation of the service that the arrangements proposed for England and Wales must be modified to suit the special circumstances prevailing in Scotland. In England and Wales it is proposed to define areas of suitable size and resources for the direct administration of the hospital and consultant branches of the service and for the local planning of the service as a whole, and to secure suitable authorities to carry out these tasks by the combination of existing authorities in the area. To do this in quite the same way in Scotland would usually be out of the question since the areas which would have to be defined for the purpose would be so big as to be quite unwieldy and indeed destructive of local government administration. The point can probably best be illustrated in relation to the hospital service. Successive Committees on hospital problems have emphasised the need for planning and co-ordinating the hospital service in Scotland over wider areas, and for this purpose have recommended the selection of the four natural hospital regions based on the Cities of Glasgow, Edinburgh, Aberdeen and Dundee, where the key hospitals as well as the medical schools are to be found, with a fifth based for geographical reasons on Inverness. While areas of this size are necessary for the planning and co-ordination of a comprehensive hospital service, they are clearly too large for local government purposes. This means that co-ordination of the hospital service and responsibility for its actual provision have in Scotland to be separated in a way which does not apply to England and Wales.

As will be seen, these special requirements in the hospital service must to some extent affect the local organisation of the other branches of the new service as a whole, and in particular it is proposed that the scope of the duties of the new Joint Hospitals Boards in Scotland shall not extend beyond the hospital and auxiliary services.

Administration of the hospital and consultant service.

It is intended to adopt the recommendations made by various Committees, including the Committee on Scottish Health Services and the Hetherington Committee, that a Regional Hospitals Advisory Council should be set up in each of the five hospital regions referred to. The Council will consist of members nominated in equal numbers by (i) the new Joint Hospitals Boards of combined local authorities in the region, and (ii) the voluntary hospitals, with an independent chairman to be appointed by the Secretary of State. In addition, it can include a small number of representatives of the medical and medical-educational interests of the region.

The functions of the Councils will be consultative and advisory. They will advise the Secretary of State on the measures necessary to secure the co-ordination of hospital planning within the region.

A further important function which the Councils will perform will be to advise the Secretary of State on the co-ordination of the consultant service between the hospitals and other services, and they might, through sub-committees, also advise hospital authorities on the filling of vacancies in consultant and senior hospital appointments.

Next, it is proposed to set up Joint Hospitals Boards formed by such combinations of neighbouring major health authorities as are found necessary to ensure that an adequate hospital and consultant service is provided for each combined area. In one or two areas where circumstances are suitable, and where the population is large enough and the resources adequate to support a satisfactory hospital service, the major health authority will continue to be the hospital authority without combination with any other local authority.

The Joint Hospitals Boards will be composed entirely of representatives from the county councils and the town councils of large burghs in the area concerned. They will take over the whole ownership of and responsibility for the hospitals of their constituent authorities, will be charged with the statutory duty of securing a proper hospital service for their area—by their own provision and by arrangements with other Joint Hospitals Boards or voluntary hospitals—and will in fact be, so far as executive responsibility for the hospital service is concerned, the counterpart of the new joint authorities in England and Wales.

The Joint Hospitals Board will have the duty of preparing a scheme for the hospital services of their area, after consultation with the voluntary hospitals. They will be encouraged also to consult the Regional Hospitals Advisory Council at this stage to secure the fullest measure of agreement between the scheme and the wider regional arrangements proposed by the Council. The Joint Hospitals Board will then submit their scheme to the Secretary of State who will consult the Regional Hospitals Advisory Council to obtain their final views before deciding to approve or amend the scheme.

As will be seen, these Joint Hospitals Boards will also be charged with responsibility for the administration of certain clinic services, such as the tuberculosis dispensaries, which can be regarded as essentially a part of the hospital service.

Administration of the clinic services.

The arrangements proposed for the clinic services in England and Wales will be modified in their application to Scotland. This is necessary because, unlike the new joint authorities to be set up in England and Wales, the Joint Hospitals Boards in Scotland will not have planning functions outside the hospital service. In these circumstances the following arrangements will apply.

Responsibility for the administration of the school health service with its numerous clinics will remain with the education authorities, namely, the county councils and the town councils of Edinburgh, Glasgow, Aberdeen and Dundee, but these authorities will be expected to use the treatment services provided under the new scheme.

Normally the ordinary local clinics such as those for the maternity and child welfare service, including ante-natal clinics, for the venereal disease service and for scabies will remain with the existing major health authorities, namely, the county councils and the town councils of the large burghs which correspond in Scotland to the county and county borough councils in England and Wales. These authorities will normally retain responsibility for the mid-wifery and health visitor services. On the other hand, there are certain clinic services which are more nearly allied to the hospital service than to a clinic service. The most notable examples of this category are the tuberculosis dispensaries and cancer clinics. The administration of these "out-post" clinics will be entrusted to the new Joint Hospitals Boards as being ancillary to their main function of hospital administration.

No further change of general scope will be undertaken with regard to the clinic service. As recommended by the Committee on Scottish Health Services, however, it is proposed to strengthen the powers of the Secretary of State to require major health authorities, after a public local inquiry has been held, to combine for any purpose where this is proved necessary for the efficiency of the new health service as a whole. In this way it will be possible to leave essentially local clinic services with the major health authorities while securing an adequate safeguard that, should the need arise in the public interest for a combination of local authorities in any area for any specific purpose, effective machinery will be available for the purpose.

The responsibility for any new clinic services will be determined by their particular function: if they are purely local services they will be entrusted to the existing major health authorities, while if they are allied to the hospital service they will probably be entrusted to the Joint Hospitals Boards.

Administration of the general practitioner service.

There will be a difference between the two countries so far as the provision, equipment and maintenance of Health Centres are concerned. In England and Wales this responsibility will rest normally with the county or county borough councils. In Scotland, however, the smaller size of the problem, the geography and the distribution of population suggest that the whole country can more conveniently be regarded as one area for this purpose, and the Centres—where they are decided upon—can be provided by the Department of Health itself, at least in the initial and experimental years. Having in view the nature of the local organisation of the health service generally, which is proposed for Scotland, it seems desirable that the provision, equipment and maintenance of Health Centres should be administered centrally in the general practitioner service. The Secretary of State will be empowered, however, to delegate any of his functions with regard to the provision of Health Centres to a local authority where he thinks this to be desirable.

Local Medical Services Committees.

The local organisation already described will secure effective liaison between the hospital and consultant services on the one hand and the local authority clinic services on the other. There remains the general practitioner service. For the purpose of linking that service with all the other parts of the new service as a whole, there will be set up, over the same areas as those of the Joint Hospitals Boards, new advisory bodies to be known as Local Medical Services Committees.

These will be to some extent similar to the Local Health Services Councils proposed for England and Wales, but with differences of function and of organisation to suit the different local arrangements in the two countries. They will be primarily advisory bodies, but because of the vital role which they will play in linking up the various branches of the health service in their areas they will need to include not only professional but local authority representatives.

The Local Medical Services Committees will consist of representatives of all the local health authorities in the area, of the local medical, dental, pharmaceutical and nursing professions, and of other interests closely concerned with the health services. The Committees will be able to appoint such sub-committees, professional or general, as they find desirable.

The primary function of these Committees and of their professional sub-committees will be to advise the Secretary of State on any questions affecting the local administration of the general practitioner service and its relationship to the other health services. As, for reasons given, the Joint Hospitals Boards will be concerned with hospital and consultant services only and not with the health services as a whole, the Secretary of State will look to these Committees—so far as the general practitioner service is concerned—for information and advice on the sufficiency and distribution of doctors in any area, the need for Health Centres, and other relevant matters.

The Committees will also provide a suitable means of liaison between the general practitioner service and the local clinic and hospital and consultant services being carried on in their areas by the local authorities and the Joint Hospitals Boards. For example, they will be able to advise the

- Secretary of State on methods of effecting the closer liaison between the family doctor, the child welfare clinics and the hospital, as forecast by the Orr Report on Infantile Mortality. They will be there to advise all those authorities as needed, and will be able also to send representatives to sit with the larger Regional Hospitals Advisory Councils to assist—with their right of directly expressing their views to the Secretary of State at any time—in making the liaison complete.

In addition, as the new general practitioner service will no longer require the local Insurance Committees which have operated under the National Health Insurance scheme in the past, no doubt such of the functions of these bodies as do not need in future to be centrally undertaken might be usefully entrusted to the Local Medical Services Committee. But these are matters for later consideration.

VIII.

•PAYMENT FOR THE SERVICE.

The cost of the comprehensive health service will mainly fall upon central and local public funds. The ways in which it might be shared between the exchequer and the local rates, and other financial aspects of the service generally, are considered in the Financial Memorandum appended (Appendix E).

So far as individual members of the public are concerned, they will be able to obtain medical advice and treatment of every kind entirely without charge except for the cost of certain appliances. They will be paying for medical care in a new way, not by private fee but partly by an insurance contribution under whatever social insurance scheme is in operation and partly by the ordinary process of central and local taxation. The position in regard to disability benefits, for those ill at home and for those in hospital, will be dealt with in the Government's later proposals on social insurance.

Hospitals in the scheme will, as explained, receive from central funds payments which will include their share of the money representing the social insurance contributions of the public, so far as this is attributable to hospital services. This share can be payable on a bed-unit basis, according to the number of beds put into the service by each hospital under each area plan—except that the share of the voluntary hospitals can, if they wish, be pooled and redistributed in the manner earlier mentioned.

The voluntary hospitals will receive in addition fixed service payments from the new joint authority in respect of all services which they render to the scheme. For the rest, they will meet the costs of their participation in the service out of their normal resources, including charitable subscriptions and donations, on which their voluntary status depends. The position of medical teaching will be specially considered.

The joint authorities will receive from central funds the bed-unit payments which include their share of the social insurance contributions attributable to hospital services. Otherwise their expenses in the service—including their service payments to voluntary hospitals—will be met partly out of rate resources and partly out of central funds. For their rate revenues the joint authorities will depend upon precept upon the counties and county boroughs included in each joint area. The county and county borough councils will receive exchequer aid towards the cost of meeting these precepts and their own expenses in the service.

IX.

GENERAL SUMMARY.

It may be convenient, at this point, to summarise the proposals of this Paper in outline:—

1. Objects in view.

(1) To ensure that everybody in the country—irrespective of means, age, sex, or occupation—shall have equal opportunity to benefit from the best and most up-to-date medical and allied services available.

(2) To provide, therefore, for all who want it, a comprehensive service covering every branch of medical and allied activity, from the care of minor ailments to major medicine and surgery; to include the care of mental as well as physical health, and all specialist services, e.g. for tuberculosis, cancer, infectious diseases, maternity, fracture and orthopaedic treatment, and others; to include all normal general services, e.g. the family doctor, midwife and nurse, the care of the teeth and of the eyes, the day-to-day care of the child; and to include all necessary drugs and medicines and a wide range of appliances.

(3) To divorce the care of health from questions of personal means or other factors irrelevant to it; to provide the service free of charge (apart from certain possible charges in respect of appliances) and to encourage a new attitude to health—the easier obtaining of advice early, the promotion of good health rather than only the treatment of bad.

2. General principles to be observed.

(1) Freedom for people to use or not to use these facilities at their own wish; no compulsion into the new service, either for patient or for doctor; no interference with the making of private arrangements at private cost, if anyone still prefers to do so.

(2) Freedom for people to choose their own medical advisers under the new arrangements as much as they do now; and to continue with their present advisers, if they wish, when the latter take part in the new arrangements.

(3) Freedom for the doctor to pursue his professional methods in his own individual way, and not to be subject to outside clinical interference.

(4) The personal doctor-patient relationship to be preserved, and the whole service founded on the "family doctor" idea.

(5) These principles to be combined with the degree and kind of public organisation needed to see that the service is properly provided—e.g. to ensure better distribution of resources and to give scope to new methods, such as group practice in Health Centres.

3. General method of organising the service.

(1) The maximum use of good existing facilities and experience; no unnecessary uprooting of established services, but the welding together of what is there already, adapting it and adding to it and incorporating it in the larger organisation.

(2) The basis to be the creation of a new public responsibility; to make it in future somebody's clear duty to see that all medical facilities are available to all people; the placing of this duty on an organisation answerable to the public in the democratic way, while enjoying the fullest expert and professional guidance.

(3) Some temporary limitations of the full service inevitable—e.g. in dentistry (owing to insufficient dentists), in ophthalmology and perhaps elsewhere; but the design to be comprehensive from the outset, and to be fulfilled as fast as resources and manpower allow.

(4) The first step to be the making of positive plans for each area of the country, determining what is needed for all people in that area; this to be followed by measures to ensure that what is needed is then secured.

(5) A combination, for all this, of central and local responsibility, to ensure that both general national requirements and varying local requirements are equally met.

4. The administrative organisation; central and local.

(1) Central.

(i) Central responsibility to Parliament and the people to lie with the Minister.

(ii) At the side of the Minister, to be a new central and statutory organisation for voicing professional views on technical aspects of the service generally; to be known as the Central Health Services Council; to represent general and specialist medical practice, medical teaching, hospital organisation and other professional interests; to be appointed by the Minister in consultation with those interests, and to choose its own chairman; to be consultative and not executive; to advise the Minister not only on questions referred to it by the Minister but also on its own initiative; the Minister to report annually to Parliament on the work of the Council.

(iii) A special executive body to be also set up, composed in the main of members of the medical profession; to be known as the Central Medical Board, and to act under the general direction of the Minister; to be the "employer" body with which the general practitioner enters into contract in the new service, and to concern itself with the distribution and welfare of practitioners and assistants.

(2) Local.

(i) Local organisation to be based on the county and county borough councils, operating in their normal local government areas where possible, but combining as joint authorities over larger areas where necessary.

(ii) Areas of suitable size and resources for the operation of a full hospital service of all kinds, to be designated by the Minister after consultation with local interests.

(iii) For each of these new hospital areas a joint authority to be constituted, being a combination of the existing county and county borough councils in the area; in the few cases where the area may coincide with an existing county area, the authority to be the county council of that area.

(iv) The new joint authority also to be charged with preparing an area plan for the health service as a whole, not only the hospital service, in manner described below.

(v) Existing county and county borough councils, while combining for these duties of the new joint authority, to be responsible severally for local clinic and domiciliary services not belonging to the hospital and consultant sphere, within the general area plan; the responsibility for child welfare to be assigned broadly on the same lines as responsibility for child education. General medical practice to be the subject of special organisation, partly local, partly central.

(vi) In each joint authority area, to be a local consultative body for voicing professional guidance on technical aspects of the service; to be

known as the Local Health Services Council; to serve a similar purpose locally to the central professional body already described; to advise both the joint authority and the county and county borough councils, and to be free to express advice and views to the Minister.

5. The planning of the local services.

(1) Each joint authority, in consultation with the local professional body referred to and with others locally concerned, to prepare an "area plan" for securing the comprehensive health service for its area; the plan to be based on an assessment of the needs of the area in all branches of the service, to propose how each of those needs should be met, and to be submitted to the Minister.

(2) The Minister to consider each area plan, and any representations made to him by the local professional body or others affected, and to approve the plan with or without modification; the plan, as approved, to be the operative plan for that area; to be the duty of all concerned to provide and maintain their services within the general framework of the plan; the plan to be modified or replaced from time to time, according to requirements, by the same procedure.

6. Provision of the various parts of the service under the plan.

(1) Hospital and Consultant Services.

(i) To be the duty of the joint authorities themselves to secure a complete hospital and consultant service for their area—including sanatoria, isolation, mental health services, and ambulance and ancillary services—in accordance with the approved area plan.

(ii) The joint authorities to do this both by direct provision and by contractual arrangements with voluntary hospitals (or with other joint authorities) as the approved area plan may indicate.

(iii) Powers of present local authorities, in respect of these services, to pass to the joint authority, with all existing hospitals and similar institutions.

(iv) The voluntary hospital system to continue side by side with the publicly provided hospitals; voluntary hospitals to participate, if willing to do so, as autonomous and contracting agencies; if so, to observe the approved area plan and to perform the services for which they contract under that plan, and to receive various service payments.

(v) All hospitals, municipal or voluntary, taking part in the service to observe certain national conditions (e.g. as to remuneration of nurses, appointment of consultants); these conditions being centrally prescribed.

(vi) Special provision to be made for inspection of the hospital service, through selected expert personnel (some part-time) working in panels over different parts of the country.

(vii) Consultant services to be made available to all, at the hospitals, local centres or clinics, or in the home, as required; to be based on the hospital service, and arranged by the joint authority, either directly or by contract with voluntary hospitals under the approved area plan.

(viii) Measures for improving the distribution of consultants, dealing with methods of appointment and remuneration, and relating this to other branches of the new service generally, to be considered after the report of the Goodenough Committee, but general direction of changes to be:—

(a) Consultants taking part to be remunerated in future (usually by part-time or whole-time salary) by the particular hospital or hospitals with which they are associated under the area plan; standards

of remuneration to be centrally settled in consultation with the profession.

(b) New arrangements for securing proper standards for consultant appointments in the service, possibly through suitable machinery set up to advise all hospitals making appointments of senior staff.

(2) General medical practice.

(i) The Minister, with the new Central Medical Board, to undertake nationally the main arrangements for a general practitioner service for the country, through which anyone who wishes to do so can associate himself with a "family doctor" of his own choice and obtain the advice and treatment of that doctor at home or at his present consulting room or at a specially provided and equipped consulting room in a Health Centre, as the case may be.

(ii) These central and national arrangements to cover terms of service, remuneration of doctors from public funds, and other general aspects of organisation, and the individual doctor to be in contract with the Central Medical Board.

(iii) The joint authority in each area to have the duty of:—

(a) including in their area plan an assessment of the needs of their area in general medical practice;

(b) keeping these needs under review and bringing to the notice of the Minister and the Central Medical Board any general features or requirements of the general practitioner situation in the area which they consider to need attention;

(c) ensuring that general medical practitioners taking part in the service in the area are acquainted with hospital and consultant and other services available under the area plan, and that they are able (as, under their terms of service, they would be required) to use those services for their patients.

(iv) The county and county borough councils to be responsible for providing, equipping and maintaining such Health Centres for the conduct of general medical practice in the new service as may be approved from time to time by the Minister in respect of any part of their area, and in such cases to be joined in the doctor's contract with the Central Medical Board.

(v) Future development to include both new methods of "grouped" medical practice in Health Centres (and, where suitable, outside them) and familiar methods of "separate" practice; each being developed as experience proves best in each area. A high place in the scheme to be given to a full and careful trial of the Health Centre method.

(vi) Existing practitioners to be able to participate in the new service in their present areas of practice, and where they do so from their own consulting rooms to be normally remunerated on a capitation basis (though other methods to be considered in certain cases if desired by the practitioners themselves). Where they participate in group practice in Health Centres, remuneration to be by salary or similar alternative.

(vii) Practice in the public service not to debar a doctor from private practice for such patients as may still request this.

(viii) Appropriate limits to be fixed to the number of persons whose care a particular doctor can undertake, taking into due account the extent of private medical practice and the calls made upon a doctor's time by other public appointments; higher limits where assistants are engaged; more regulation of the conditions of the employment of assistants in the service;

a requirement that newly qualified doctors shall normally serve a period as assistants before practising on their own in the new service, and power for the Central Medical Board to require them to give full time to the public service in their early years if necessary.

(ix) New practitioners wishing to participate in the service, and existing practitioners wishing to do so in new areas or new practices, to be required to obtain the consent of the professional Central Medical Board—to check the need for additional public practice in the area, and to ensure a reasonable distribution of resources inside the public service.

(x) Compensation for loss of selling value of practices to be payable where a doctor transfers his public practice into a Health Centre, or where a public practice falling vacant is not allowed to be refilled by the Central Medical Board.

(xi) Superannuation to be provided for doctors practising at Health Centres and, if practicable, for doctors participating in the service in other forms of practice.

(xii) The question of the sale and purchase of public medical practices in future to be discussed more fully with the profession.

(3) Clinic and other local services.

(i) To be the duty of the joint authority to deal in its area plan with all necessary clinic and other local services (e.g. child welfare, ante-natal and post-natal clinics, home nursing, health visiting, midwifery and others), and to provide for the co-ordination of these services with the other services in the plan.

(ii) Administration of these local clinic and non-hospital services, however, to be normally the responsibility of the individual county and county borough councils which collectively make up the joint authority: the administration to be in accord with the general provisions of the area plan.

(iii) The exact allocation of responsibility between the joint authority and the individual county and county borough councils to be settled in each case by the Minister in determining the area plan; but normally on the principle that services belonging to the hospital and consultant sphere fall to the joint authority, while other local and clinic services fall to the individual councils.

(iv) Child welfare duties always to fall to the authority responsible for child education under the new Education Bill, but to be as much the subject of the "area plan" as any other branch of the service.

(v) New forms of service, e.g. for general dentistry and for general care of the eyes, to be considered with the professional and other interests concerned as soon as circumstances allow. In the case of dentistry, the report of the Teviot Committee to be first awaited.

7. The service in Scotland.

(1) The scope and objects of the service to be the same in Scotland as in England and Wales, and the foregoing proposals to apply generally to both countries—but subject to the differences below.

(2) Certain differences in detailed application in Scotland, due to special circumstances and geography and existing local government structure there; differences mainly affecting the arrangement of responsibility, central and local, for planning and carrying out the service.

(3) Central responsibility to rest with the Secretary of State. A Central Health Services Council and a Central Medical Board to be set up, as in England and Wales.

(4) Local organisation to differ from that in England and Wales and to be on the following lines:—

(a) Regional Hospitals Advisory Councils to be set up for each of five big regions; to consist of equal representation of the new local authority Joint Hospitals Boards (below) and of voluntary hospitals; also representation of the Local Medical Services Committee (below) and of medical and medical-education interests; independent chairman to be appointed by Secretary of State.

Councils to be advisory to Secretary of State on the co-ordination of the hospital and consultant services in each region.

(b) Joint Hospitals Boards to be formed by combinations of neighbouring local authorities (county councils and town councils of large burghs), to ensure an adequate hospital and consultant service in their areas; these to take over all responsibility for the hospital services of the constituent authorities (including services like the tuberculosis dispensaries, which essentially belong to the hospital and consultant field) and also to arrange with voluntary hospitals.

These Joint Boards to prepare a scheme for the hospital service of their areas, to submit this to the Secretary of State, who will consult the Regional Hospitals Advisory Council before deciding to approve or amend it.

(c) Education authorities (county councils and town councils of four cities) to retain responsibility for school health service and clinics; existing major authorities (county councils and town councils of large burghs) to retain responsibility for the ordinary local clinic and similar services; the necessary co-ordination to be secured (i) through their membership of the Joint Hospitals Boards and (ii) through the Local Medical Services Committees (below).

Powers of Secretary of State to be strengthened to require local authorities to combine for any purpose proved necessary, after public local enquiry, for the efficiency of the new service as a whole.

(d) Local Medical Services Committees to be set up over the same areas as the Joint Hospitals Boards; to be advisory bodies; to include representation of all the local health authorities and of local medical, dental, pharmaceutical and nursing professions and other interests; free to appoint smaller sub-committees and groups, as found desirable.

These Committees to advise the Secretary of State on local administration of the general practitioner service; also to provide liaison between the different branches of the service.

(5) Central provision of Health Centres more suitable in Scotland owing to the smaller size of the problem and the special circumstances of geography and distribution of population—with a power to the Secretary of State to delegate his functions in this respect to a local authority, where found desirable.

8. Financial.

(i) The service to be free to all, apart from possible charges for certain appliances. Questions of disability benefits, for those ill at home and for those in hospital, to be dealt with in later proposals on social insurance.

(ii) Cost of the service to be met from both central and local public funds. These arrangements, as affecting the various local authorities and the voluntary hospitals, are fully considered in a special financial memorandum appended.

APPENDIX A.

THE EXISTING HEALTH SERVICES.

GENERAL SURVEY OF THE PRESENT SITUATION AND ITS ORIGINS.
ENGLAND AND WALES.

Before the nineteenth century there was little regular intervention by public authority in the personal health of the people, which was left to rest in the main on private arrangements and on various forms of charity and voluntary organisation for relief. The early nineteenth century brought the beginning of full-scale attempts to protect and relieve the destitute (and as a corollary to tend the destitute sick) and also a quickening of interest in the welfare of the younger generation, particularly in the supervision of child labour in industry. As the century went on, more attention began to be given to the environmental conditions of health, to sanitary services, drainage, water supply, street cleaning and the whole make-up of public hygiene, and to the idea of local government responsibility in matters of public health—while measures for the prevention of the major infectious diseases, including notification and isolation, became more and more the subject of public regulation and concern. It was not, however, until the present century that the public provision of direct services for personal health began to get into its real stride, and began to evolve the wide variety of services which are now familiar—like the services for maternity and child welfare, midwifery, tuberculosis, the health of the school child, the National Health Insurance scheme, venereal diseases, and the provision of general hospitals by public authority for others than the destitute sick.

In general terms, the result is a complicated patch-work pattern of health resources, a mass of particular and individual services evolved at intervals over a century or more—but particularly during the last thirty or forty years—and for the most part coming into being one by one to meet particular problems, to provide for particular diseases or particular aspects of health or particular sections of the community. Each, as it emerged, was shaped by the conditions of its time, by the limited purposes for which it was designed, and perhaps by the fashions of administrative and political thought current when it was designed. Most of these services, though progressively expanded and adapted as the years have gone on, are still broadly running on the lines laid down for them at the start and are administered largely or, partly, as separate and independent entities. The patch-work, however, contains some very good pieces—well established and by now rich in experience.

It is worth looking at these principal pieces in more detail—to make a survey of how the ordinary man and woman and child can at present get the various medical services which they need.

General Medical Care.

To the individual the natural first-line resource in all matters of personal health is the general practitioner—the personal medical adviser, the “family doctor.” With one important exception (and a few minor ones) the relationship of the ordinary member of the public to the general medical practitioner has been, and is now, a matter of private arrangement. He makes his own choice of doctor, from among those who happen to be accessible to him, seeks his advice and attention when he wishes to, and pays whatever private fees the doctor is accustomed to charge him. The relationship is a purely personal one between doctor and patient, and no form of public organisation is involved in it. The general medical practitioner, for his part, pursues his profession privately and individually. He decides for himself where he wishes to practise, he usually obtains the “good-will” of an existing practice by purchase from another practitioner, and he practises in the open competitive market. He may choose to combine with other practitioners in a voluntary partnership—and there is an increasing tendency to do so in recent years—but that is an individual decision and a matter of business agreement. The traditional basis of general medical practice, in fact, is one of free and private buying and selling in which the State does not intervene—apart from the provisions of the Medical Acts with regard to qualification and registration and professional conduct.

The earliest exception to this rule was the provision of a general practitioner service under the poor law. An organisation designed for the "destitute sick," and including a domiciliary service, was gradually built up throughout the nineteenth century and still gives valuable aid to those in difficulty. Although generally officered by part-time (or occasionally whole-time) District Medical Officers, it has in recent years been converted in some areas into a service of the "panel" type, in which all doctors practising in the locality can take a share. Apart from this limited service, arrangements for general practitioner treatment were, up to 1912, either of a purely private kind or were organised by Friendly Societies, medical clubs and similar organisations.

The National Health Insurance service, instituted in that year, formed part of the provision made by the National Health Insurance Act for the protection of the bulk of the working population against loss of health and for the prevention and cure of sickness. Broadly speaking, its "medical benefit" extends to the whole insured population (some 21,000,000 people) representing for the most part those employed under contracts of service whose income is less than £420 a year. These select from the local panel of doctors their personal medical attendant, who can be consulted as and when the need arises, without fee, and from whom they can obtain such advice and treatment (including visits at their homes) as are within the ordinary scope of the general practitioner. Similarly, they can obtain drugs which the doctor considers requisite and a limited class of surgical and medical appliances. Provision is also made for the issue of medical certificates free of charge. Any doctor who so wishes has the right to take part in the service. The range of medical benefit provided by the scheme does not normally cover consultants or hospital services, although certain facilities for obtaining specialist advice and diagnostic services in difficult cases are afforded. The scheme is designed in fact for a limited object, which is to enable the great bulk of the employed population to get advice and treatment and necessary medical certificates from doctors of their own choice, without the deterrent of fees. This object has, on the whole, been fulfilled.

Apart from the National Health Insurance scheme and the poor law, there is no public provision for general medical attention on any considerable scale. There are various special services for children and other limited groups, as will be seen. Also some adult members of the public are entitled to general advice and treatment under schemes for particular vocational groups (such as Post Office employees or the Police) some carried on by Government departments, others by local authorities, and others by large industrial concerns. Some members of the public—particularly in parts of the London area—obtain advice and treatment from the out-patient departments of hospitals and from dispensaries of various types without going first to a general practitioner. Others do so through co-operative arrangements made in societies or clubs—an example of which can be seen in the "Public Medical Services" set up in some areas, largely for the dependants of insured persons on the initiative of the medical profession itself. A war-time development of a somewhat similar kind has been the arrangement made by the Government, through the Local Medical War Committees of the profession, for the medical attendance of evacuated school-children.

Hospital and Consultant Services.

For those who require hospital treatment, as in-patients or as out-patients, or who require specialist advice beyond the ordinary scope of the general medical practitioner, a wide range of hospital services is available. The individual may, of course, choose to enter a private nursing home and to engage the services of a specialist to attend him there—just as he may, for consultation, make purely private arrangements with the specialist at his home or at the specialist's consulting room. In such cases the whole matter is one of personal arrangement at private cost, in which no intervention of a publicly organised service arises—although the State intervenes to a limited extent to secure reasonable standards by the registration and inspection of nursing homes. Similarly, the individual may arrange to enter a private room or ward set aside in a voluntary

hospital for those who want to make their own arrangements at their own expense. Apart from any such private arrangements as these, the public look to the ordinary hospital services both for hospital treatment and for specialist medical advice, usually arranging for either or both through their general medical practitioner in the first instance. "

There are two distinct systems of hospital provision in this country, running side by side—the voluntary hospitals and the public or municipal hospitals. They have quite separate origins and histories, and are quite differently organised and financed. In earlier years the two systems had little working contact with each other and each went its own way with its own kind of service to the public. In recent years there has been an increasing tendency for the two systems to get closer together, to realise their common aims in the service of the public and the value of a greater degree of organised partnership in improving that service together. But in all questions of hospital provision and of future hospital reorganisation it has to be clearly kept in mind that there are these two quite distinct systems at the moment, and that both are strongly rooted and established, with their own traditions and experience. The way this has come about, and the extent to which each contributes in making up the present total service, are not always clearly kept in mind—and are worth summarising.

Until recent years the main burden of providing hospital treatment for acute medical and surgical conditions (though not so much for infectious diseases or mental ills) was carried by the voluntary hospitals, and rested in fact upon voluntary philanthropy rather than on publicly organised provision. The voluntary hospital is, in essence, an independent charitable organisation, deriving its money from the voluntary subscriptions or donations or endowments of benevolent individuals or associations; it is administered by its own governing body or trustees and provides its own service to the public in its own way, subject to the conditions laid down by its constitution. In origin, a few of them can trace their existence back to mediæval ecclesiastical foundations, but the great majority have come into being during the last two hundred years. There are, at the present day, more than a thousand voluntary hospitals in England and Wales, and they vary enormously in type and size and function. Some of them are large and powerful general hospitals of the kind familiar in London and certain of the big cities, with distinguished specialists and consultants available, with first-class modern equipment and treatment facilities, sometimes associated with well-known medical schools, and drawing their patients from areas wide afield—as leading institutions in the medical world. Others are highly specialised hospitals, concentrating on particular kinds of diseases and conditions such as eye conditions, or ear, nose and throat complaints, or diseases of the nervous system. The rest cover a wide and varying range of size and function, with varying degrees of specialist and other facilities, including a large number of small "cottage" hospitals served in the main by the local general practitioners and really functioning as local nursing homes for the mutual convenience of doctor and patient. Something of the diversity of size and scope of the voluntary hospitals is evidenced by the fact that, of rather more than 900 hospitals in England and Wales of which particulars were available before the war and which provided about 77,000 beds, there were about 230 specialised hospitals dealing mainly with particular diseases, and the general all-purpose hospitals numbered about 700. Of these 700 only some 75 were hospitals of more than 200 beds (and about 25 of these were teaching hospitals); some 115 of the rest provided between 100 and 200 beds each; over 500 had less than 100 beds, and more than half of these had less than 30 beds.

The other arm of the present hospital services—the hospitals provided directly by public authority out of public funds—had its first roots partly in the early public measures for protecting the sick poor, in the first half of the last century, and partly (a little later in that century) in measures which were taken to combat the spread of epidemic infectious diseases. From these two strains there gradually emerged, in recent years, the wider conception of providing through local government machinery and out of public funds a general hospital service—no longer related only to the sick poor or to infectious diseases, but catering for the ordinary public and their ordinary hospital needs.

From the time of the earliest poor-houses it was usual to provide some sort of public accommodation for the destitute sick. Out of the first horrors of the mixed workhouse there began to emerge the notion of the separate and special sick ward, endorsed by the Poor Law Commissioners and adopted more and more by the early Boards of Guardians; from this the wholly separate infirmary or poor law hospital developed—catering still in the main for the chronic and incurable or senile cases. Standards improved, the poor law flavour diminished, and the interpretation of the "destitute" sick became elastic; the field of treatment grew and the poor law idea as a whole became outworn as the expanding public health services began to oust it. This long process of over a century culminated at last, in 1930, in the final acceptance of the principle that general hospital provision was a proper activity of the major local health authorities, rather than of the poor law machinery.

Since 1930 it has been the accepted function (though not the statutory duty) of the major local authorities—the county and county borough councils—to enter the field of general hospital provision for the ordinary hospital case, side by side with the voluntary hospitals already engaged in that field. Many of the earlier poor law hospitals have been taken right out of the poor law sphere and converted to this new and wider function, and new hospitals have been built. Some of the older poor law hospitals still form part of the poor law service (which has itself also passed into the hands of the county and county borough councils), but many even of these have lost their earlier poor law atmosphere. The result of all this new activity is that, just before the war, there were in England and Wales—quite apart from special hospitals for such conditions as maternity, tuberculosis, or infectious diseases—nearly 70,000 beds in 140 general hospitals maintained by the local health authorities under public health powers, and nearly 60,000 more in 400 hospitals and institutions still administered under the poor law. This great pool of 130,000 beds represents a varied service, at every stage of development from the sick wards of an institution for the aged or chronic sick to the most modern and up-to-date of hospitals with every kind of special department and equipment and highly skilled staff.

It has for some time been recognised that all these varying and independently provided hospital facilities, both in the voluntary system and in that of the public authorities, need a great deal more co-ordinating, and some supplementing, so as to ensure a right distribution of hospital accommodation according to local need—and so as to secure that all the types of specialised and general work which the different hospitals are best qualified to perform are arranged in some better related scheme; in a word, to make the hospitals complementary to each other in a combined and balanced service.

At present the hospital facilities to which any particular individual can get access, when in need, depend to a large extent on what kind of hospitals happen to be available in his area, on his ability—if the right hospital is not at hand—to go perhaps a long way afield and arrange for admission to one elsewhere, and on the extent to which his local doctor has been able by his own initiative to maintain personal contact with hospitals and consultants. It is not at present the duty of any public authority, central or local, to ensure that all the right kinds of hospital facilities are available and reasonably accessible to him or that every general practitioner is readily able to obtain every kind of hospital or consultant service which he is likely to need for his patients. The exercise by the major local authorities of their power to provide hospitals and the activities of voluntary hospitals do between them often have the result that the right hospital is where it is wanted and do usually have the result that hospital provision of some kind is available in every area. But these present powers and activities do not extend to any duty to review all branches of the local hospital service and to see that they are so adjusted to each other—and if necessary so supplemented—that the total service available corresponds, both in kind and in quality, with the likely demands upon it. The anomalies of large waiting lists in one hospital and suitable beds empty at another, and of two hospitals in the same area running duplicated specialist centres which could be better concentrated in one more highly equipped and staffed centre for the area, are largely the result of a situation in which hospital services are many people's business but nobody's full responsibility.

When admitted to hospital in the ordinary way, the patient is usually expected to pay what he can reasonably afford towards the cost of his treatment and accommodation there. Local authorities are required to make these charges (except in the case of infectious disease, where they have a discretion) and voluntary hospitals usually follow the same practice. Very often the patient compounds for this liability by joining one of the many contributory schemes, associated with voluntary hospitals, in which he pays a small sum weekly and in return is paid for by the scheme's fund when he is in hospital. Those schemes may apply only to a particular hospital or group of hospitals—on which he must then depend entirely or go elsewhere and pay what he can afford—or they may (and this is the growing tendency in the more up-to-date schemes) entitle him to be relieved of payment in any hospital, whether voluntary or belonging to a public authority, in a wide variety of hospitals.

On many of the existing hospitals the wartime Emergency Hospital Scheme of the Government has had a considerable effect. Seeking to use (and where necessary to improve) the services of the hospitals for various war-time purposes, this emergency service has temporarily entered the field, adding new buildings and extensions to the number of about 50,000 beds; up-grading surgical and X-ray and other medical facilities; relating the hospitals one to another for the interchange of patients according to their special needs; developing specialised treatment centres for fractures and rehabilitation, brain surgery, chest disorders, neurosis and other purposes; and providing inter-hospital transport, country branches and recovery and convalescent homes. It is a war-time organisation which would not suit the requirements of peace; but it will, in its passing, have left improved resources—even entirely new hospitals where none existed before—and above all experience of what it means to translate a collection of individual hospitals into something of a related hospital system.

Rehabilitation.

What has come to be known as "rehabilitation" is more a process or a method than a separate organisation or service. But its requirements, in modern technique, have caused it to be so often specially and separately considered in recent years that it justifies special mention in this review.

So far as it belongs to the sphere of the health services (it is partly a health problem, partly an industrial and vocational one) it rests on the principle that the actual mending or curing of an injury or disease is often not sufficient unless it is accompanied by a process of completely restoring the whole of the patient's previous capacities—or doing so as completely as possible; i.e. restoring the whole of muscle tone, of full function, of general health and strength, as well as cure of what was wrong. It involves various processes supplementary to ordinary treatment, such as massage, exercise, electro-therapy and occupational therapy, and therefore it may often involve special accommodation and apparatus and staff. Thus, while in principle it has been accepted in good surgery and medicine for a long time, it has still not become as much part and parcel of hospital and medical practice as many think it ought to be, and it is legitimate criticism of the existing services that they are not yet organised on the whole (although there are brilliant exceptions in particular areas and institutions) to give the scope that ought in future to be given to the rehabilitation aspect of hospital and medical treatment.

Considerable experiment has been conducted—and considerable result achieved—in this direction by developments in particular hospitals and centres under the Emergency Hospital Scheme. An important review of the whole subject was published recently in a report of an Interdepartmental Committee on the Rehabilitation and Resettlement of Disabled Persons, and this report recommended greatly increased attention to the rehabilitation principle in any future arrangements of the hospital and health services. The subject is not one for any detailed review here, but it has to be mentioned if only to note what has hitherto been a deficiency in existing services and to keep in mind the necessity for developing it in any reorganisation.

Infectious Diseases and Isolation Hospitals.

Apart from sanitary and other improvements, public action in relation to infectious diseases was first taken in the Vaccination Act of 1840, providing public

facilities for vaccination against smallpox. In 1853 provision was made for penalties against parents for failure to have their children vaccinated, and a series of enactments on the vaccination question followed right up to the present century. Since 1898 it has been possible for a parent or guardian who believes that vaccination would prejudice a child's health to withdraw the child from the application of the Acts. At the present time only one-third of the children born each year are vaccinated. It is probable that the time has come to amend the law, and to substitute for compulsory vaccination a system of free vaccination for all through the family doctor, the clinic services, or otherwise. This is the method adopted during the present war in organising the immunisation of children against diphtheria. Supplies of the necessary toxoid have been provided free, and immunisation has been performed normally without charge to parents, while every method of publicity has been used to encourage them to take advantage of the facilities provided. By the end of 1942 about half the child population under 15 had been immunised.

Infectious diseases are the subject of a special service of treatment in isolation hospitals, which is provided by the councils of the boroughs and urban and rural districts, but not usually the county councils. This separately organised service was one of the earliest of the local government medical services to take shape—as far back at 1866. Before that, some of the charitable institutions had provided specially for fever or smallpox patients, and the invasions of Asiatic cholera which began in 1831 had reinforced the arguments of the Poor Law Commissioners that there should be more regular provision made for infectious diseases; but only temporary measures had been taken during epidemics under orders made by the Privy Council. The first real powers to provide public isolation hospitals began with the Sanitary Act of 1866, and from then on the local authorities of the sanitary districts—which became in time the county borough, borough and urban and rural district councils—began to develop, severally or in combination, the system of the separate treatment of infectious diseases in isolation hospitals which exists to-day. In London a special Metropolitan Asylums Board was created in 1867 for the central provision of asylums for certain of the sick poor, and it became in time the general provider of infectious diseases hospitals for the metropolis, until its services were finally transferred to the London County Council in 1930. In spite of the general tendency to attach public hospital provision to county councils and county borough councils, the county councils were not, prior to 1929, brought very directly into the infectious diseases service, though they were given certain powers by the Isolation Hospitals Acts, 1893 and 1901, which have since been repealed. In 1929, by the Local Government Act, they were given the function of drawing up a local scheme for adequate isolation accommodation in each county, in consultation with the county district authorities. The carrying out of the schemes has normally remained a function of the latter authorities, though occasionally a county council has undertaken the provision for the whole or part of a county.

In 1883 the sanitary authorities were authorised to make certain infectious diseases notifiable in their respective districts, if they so desired; before that notification applied only in a few areas where special powers had been conferred. Ten years later the notification principle was made universal throughout England and Wales for these diseases. Other diseases, such as tuberculosis, have since been made notifiable by general regulation of the Minister. Local authorities can also, with the Minister's approval, make local additions to the list.

The present situation is that there are some 1,500 local authorities with powers to provide for the hospital treatment of infectious diseases (including smallpox) in their areas. They do not all make separate and independent provision, and the obvious good sense of pooling resources so as to plan a more useful and economical service for larger areas has resulted in many of them combining into formal Joint Boards or less formal joint committees for the purpose. About 800 of them have so combined, into about 160 Joint Boards—apart from the other less formal combinations referred to—so that the principle of planning over more suitably sized areas already exists to a considerable extent in this service.

Altogether there were, just before the war, something like 38,000 beds in isolation hospitals provided under the infectious diseases and smallpox service,

and they were to be found in some 810 separate hospitals, about 630 of which contained less than 50 beds. The hospitals thus tend to be small (although there are well-known exceptions) and they vary considerably in quality. Some of the provision is very good of its kind, much of it reasonably satisfactory; but in general the small and separate hospital for infectious diseases is uneconomical, viewed as a medical and nursing organisation; and for most infectious diseases it is to be regarded as less satisfactory—in future planning from the medical point of view—than either the provision of larger units or of separate blocks inside the bigger organisation of the general hospitals.

Admission to infectious diseases hospitals is in many areas quite free of charge for any of the inhabitants of the area—as distinct from the ordinary practice of recovery of costs according to ability to pay, which applies in the general hospital services.

Tuberculosis.

Public measures for the care of the tuberculous are organised under a separate machinery, and in many cases by different authorities from those concerned with general infectious diseases. Before 1912 there existed some 5,000 or 6,000 tuberculosis beds in sanatoria or hospitals, mostly administered by voluntary organisations or private individuals, and mostly quite small. The greater part of them had been established within the previous ten years or so. A few local authorities had provided sanatoria themselves, and some were treating tuberculosis cases in smallpox hospitals or infectious diseases hospitals when accommodation was available. There were also about 50 tuberculosis dispensaries in existence. From 1912 onwards public intervention in the treatment of tuberculosis began to quicken and in that year all forms of the disease were made for the first time notifiable. Local authorities were encouraged by exchequer grants to make better provision for the treatment of tuberculous persons in their areas and sanatorium benefit under the National Health Insurance scheme was designed to secure that insured persons if they were found to be suffering from the disease should get the advantages of sanatorium and other treatment whether or not they could afford to pay for it.

The strain of the 1914-18 war was reflected in an increased incidence in the disease and there was a heavy demand for accommodation, in particular for men discharged from the Forces. This led to increased exchequer assistance which resulted in further provision of sanatoria and other accommodation. In 1921, Parliament imposed a general duty on the county and county borough councils to make arrangements for the treatment of tuberculosis, this legislation being later incorporated in the Public Health Act of 1936. From these beginnings there has emerged a strong and still developing special service dealing with all aspects of the diagnosis and treatment of the disease and providing a considerable amount of supplementary help and after-care to those suffering from it. The county and county borough councils fulfil their duties partly by their own direct provision of dispensaries, sanatoria and other institutions, partly by arrangements which they make with voluntary and other agencies. At the outbreak of the present war there were some 28,000 regular beds in tuberculosis institutions, with many more available in approved institutions for use when required. About 400 sanatoria were provided by the local authorities directly, and some 270 by other agencies. These sanatoria are not usually very large, only about 30 having more than 200 beds.

Apart from actual diagnosis and treatment, the service provides—in a degree varying from area to area, and partly through voluntary Care Committees or similar organisations—a variety of supplementary services dealing with additional comforts, extra nourishment and clothes, training for employment, help in obtaining suitable housing, dental care, and other matters. Valuable pioneer work in rehabilitation and resettlement of the tuberculous has been done by a small number of voluntary organisations, eminently in two well-known village settlements and tuberculosis colonies. Local authorities have made full use of these facilities, just as for suitable types of case they have linked up with the training and settlement resources of the Ministry of Labour and National Service. Increasing interest has recently been taken in the rehabilitation of the tuberculous patient

(although hampered at the moment by the restricted conditions of war), and also in new aids to early detection and diagnosis afforded by mass miniature radiography. Another recent advance has been the scheme for the payment of allowances to patients under observation or treatment, in order to encourage early recourse to treatment where financial responsibilities might otherwise be an obstacle tending to delay it.

For the exercise of their duties a few local authorities have combined with each other in seven Joint Boards. Some of these Boards have taken over all the tuberculosis services of their constituent authorities; some only undertake the joint management of particular institutions. A unique experiment in large-scale combination has been in operation in Wales for the last 30 years, in the King Edward VII Welsh National Memorial Association. This was established in 1910, as part of a national campaign against tuberculosis in Wales, and its special constitution (under a Charter of Incorporation) provides for the representation of all the county and county borough councils in Wales, and also includes co-opted members, members nominated by the Minister of Health and others. It provides dispensaries and visiting stations and some 2,000 beds in its own sanatoria and hospitals, and also arranges for accommodation through other agencies.

The tuberculosis service—even after allowing for the indirect effects of improved housing and food and environmental conditions generally—has very tangible results to its credit over the last twenty years reflected in improvements in the rate of mortality from the disease. It tends to be administered as a separate entity, perhaps not enough related to the diagnosis and treatment of other chest and respiratory conditions or to the work of the general hospitals, because it has come into being as a separately organised service with one particular objective.

Venereal Diseases.

A special service for the early diagnosis and treatment of venereal diseases has, since 1916, been the responsibility of the county and county borough councils. It provides some 200 out-patient clinics and centres (usually by arrangement with local hospitals, sometimes independently) for free and confidential diagnosis and treatment for all, irrespective of place of residence or circumstances. Hospital beds and hostels are usually available for in-patient treatment if required. During the war the service has been supplemented by arrangements made, particularly in rural areas, under which suitably qualified general practitioners give free treatment in their own consulting rooms. Doctors in general practice are always at liberty—and are encouraged—to use the laboratory and other resources of the service free of charge and to consult the expert medical officers of the service on any case under treatment.

Cancer.

Just before the present war the Cancer Act of 1939 put upon the county and county borough councils a new special duty, to see that facilities for the diagnosis and treatment of cancer were available to meet the needs of their areas. The Act contemplated a new and comprehensive service for detecting and treating the disease, based on a local scheme which would utilise existing resources (in voluntary hospitals and elsewhere) and would supplement them as necessary, with new diagnostic centres and with additional treatment facilities. It was expected that, in many cases, it would be necessary for county and county borough councils to combine in order to operate an effective scheme over a wider area, and provision for such combination was included in the Act. The whole service would be backed by arrangements for access to a centralised supply of radium organised by the National Radium Trust and Radium Commission.

The outbreak of war immediately after the Act was passed, however, prevented the new service from materialising—except for a few interim schemes which have been started in some areas. Some special war-time arrangements, designed to relieve some of the cancer centres in certain large towns, have been made through the Emergency Hospital Scheme, but these do not properly form part of the present review.

Mental Health Services.

Provision for the care and treatment of persons suffering from mental disorder is made by local authorities under the Lunacy and Mental Treatment Acts, 1890 to 1930. The local authorities concerned are the councils of counties and county boroughs, and of 15 non-county boroughs. Many of the functions are obligatory, particularly as regards provision for certified patients. The powers conferred on local authorities in regard to provision for voluntary patients and out-patient diagnosis and treatment are permissive; but this part of the service has in fact developed rapidly since the passing of the Mental Treatment Act of 1930. In 1941, 35 per cent. of the admissions to public mental hospitals were voluntary patients. Local authorities are required by these Acts to exercise all their powers and duties through Visiting Committees which have powers in regard to staff and finance that give them a certain measure of independence. This arrangement is a survival of an Act of 1845. Three county councils—London, Middlesex and Surrey—have by local Act modified this arrangement so as to bring the committee dealing with this service into line with the position normally occupied by statutory committees of local authorities.

In this service combination between authorities is a common feature. There are three Joint Boards established under local Acts. These provide for the combination of the county council with the county boroughs in the county in Lancashire, the West Riding of Yorkshire and Staffordshire. Joint action has been taken under the provision of the Lunacy Act by a large number of counties and county boroughs for the provision and maintenance of a mental hospital to serve the combined area. Of 101 public mental hospitals (accommodating some 130,000 patients) 42 are managed by a Joint Board or by a combination of two or more local authorities. The provision of a public mental hospital must clearly be entrusted to an authority covering a considerable area. The average number of beds required per 10,000 of population is about 32. The optimum size of a public mental hospital is between 1,000 and 1,200 beds, and it has been found that when the number of beds in such an institution is below 500 it tends to become uneconomical in management.

Under the Lunacy and Mental Treatment Acts a considerable number of patients are treated in private institutions. Some 2,500 are in registered hospitals (i.e. private institutions supported partly by voluntary contributions or charitable bequests) and rather more in licensed houses, i.e., private profit-making establishments, licensed under the Lunacy Act. There are about 12,500 persons of unsound mind in the public assistance institutions and public health hospitals.

Provision for the care of mental defectives is made under the Mental Deficiency Acts, 1913 to 1938. The local authorities concerned are the county and county borough councils. For the execution of the Acts these councils are required to appoint a committee for the care of defectives, some members of which may be co-opted. Certain of the functions are obligatory while others are permissive. The local authorities are required to make arrangements to ascertain what persons within their areas are defective and subject to be dealt with under the Mental Deficiency Acts. The service covers provision for institutional care for patients who need it and community care for defectives who are placed under guardianship or supervision. There are some 37,000 mental defectives in certified institutions, and about 5,000 under guardianship and 37,000 under statutory supervision. Some 9,500 are in public assistance institutions approved for the reception of mental defectives.

Institutional provision under the Act generally is considered to be inadequate. The operation of the principal Act of 1913 was checked at its inception by the outbreak of the last war, and further developments are essential if an adequate service is to be provided. Here again joint action is fairly common, 13 out of a total of 61 certified institutions being carried on by Joint Boards or Joint Committees. Some of the largest certified institutions have been provided by organisations other than local authorities; and there are a number of small certified houses and approved homes which are privately owned.

The central supervision of the mental health services is exercised by the Board of Control, which was reorganised under the provisions of the Mental Treatment Act, 1930. The members of the Board are appointed by the Crown, on the recommendation of the Minister of Health, with the exception of the legal

member, who is appointed on the recommendation of the Lord Chancellor. The Minister appoints the Chairman, and the appointment of the staff of the Board is also subject to his approval. He is responsible for the presentation of the Board's estimate in Parliament, and answers questions in the House of Commons relating to the mental health services. He is consulted, and his directions are taken by the Board, on all questions of major policy. The Board exercises independently of the Minister certain quasi-judicial functions conferred on them by statute in relation to the discharge of individual patients.

Maternity and Child Welfare.

The health of the expectant or nursing mother and of the child under five who is not attending school is the subject of a specially organised maternity and child welfare service. This service is mainly a development of the present century, and particularly of the years between the two great wars. There were beginnings in the latter part of the nineteenth century, when concern about the high infant death rate led to the start of a health visiting service of women workers (volunteers at first, then professional and qualified visitors) who advised mothers on infant welfare in their homes; it led also to the establishment of special depots or centres, where the mothers could attend for advice, and for milk and other special necessities. This work was made easier, and the way for a more organised service was paved, by making the notification of births compulsory—a process which began in 1907 and was extended in 1915. The real foundation of the present service was, however, the Maternity and Child Welfare Act of 1918.

The service is provided by local welfare authorities, which may be county councils or county borough councils or minor authorities according to circumstances which need not be elaborated here. The actual result is that outside London there are nearly 400 separate local welfare authorities, of which 60 are county councils, 83 county borough councils, 162 borough councils, 63 urban district councils, and 10 rural district councils. In London the Common Council of the City and the 28 metropolitan borough councils are the welfare authorities. The service is not a duty of these authorities, but a power—although in practice all of them provide it, in varying degree. It is concerned to provide medical and general advice and attention (but not treatment, except for a few minor ailments) to the young child and its mother, before the child's birth and afterwards until it is five years old or until it attends school. The service includes the provision of ante-natal and post-natal clinics and welfare centres, where attendance is for the most part free and advice and minor treatment are given, the supply of milk and special foods, and the visiting and advice of health visitors at the home.

The close connection between this service and the school medical service, which is referred to below, has always been recognised and under the Local Government Act, 1929, the Minister has power, on representations made by a council which is the education authority, to transfer the welfare functions to that council. When the two services are in the hands of the same body they are usually linked closely with each other.

For her actual confinement the expectant mother may be helped by the welfare authority—through their own provision or through arrangements made by them with other agencies—to get admission to a bed in a maternity home or hospital. She may, alternatively, be confined in accommodation provided as part of the general hospital services. Or again she may, and commonly does, have her confinement at home, and in this case there is a separately established midwifery service which has grown up under the Midwives Acts 1902-1936 in the hands of local supervising authorities. These—for historical reasons—may or may not be the same as the welfare authorities; there are in fact 188 of them and they include 62 county councils, 83 county borough councils, 39 borough councils and 4 urban district councils. Their original duties (which explain their title) were to supervise the practice of independent midwives in accordance with the professional rules of the Central Midwives Board; but since 1936 they have been charged to see that an adequate service of domiciliary midwives is available in their area for those who need it, and they do this either by arrangement with voluntary organisations or by themselves directly engaging and employing midwives. Of some 16,000 midwives in practice, nearly 2,700 are directly employed by the local authorities as domiciliary midwives and over 5,200 are in the employment of voluntary

bodies, usually county or district nursing associations. Many midwives, particularly in country areas, combine midwifery work with home nursing and health visiting.

Notwithstanding the complication of the system, the quality of the maternity and child welfare and midwifery services is in general high, although they vary in scope considerably from area to area. Results, reflected in lower maternal and infant mortality, have been striking and well reward the growing efforts of the service in its relatively short development between the two wars. The commonest ground of criticism is that it is divided up among too many separate agencies and kept too much apart from the related fields of the family doctor and the hospital and specialist services.

Home Nursing.

Home nursing forms a most important branch of the health services, and one which is almost entirely the concern of voluntary organisations. Local authorities have limited powers to employ nurses for nursing at home patients suffering from infectious diseases, or expectant or nursing mothers or children under five suffering from various conditions, but they have no general power to provide a home nursing service and the number of nurses employed directly by them is very small. Within the limits of their responsibilities local authorities have, however, used extensively the services of the voluntary organisations providing home nurses, and they have also assisted them financially under powers, originally derived from the poor law, enabling them to make subscriptions and donations to these bodies.

The home nursing service is for the most part provided through district nursing associations, the majority of which are affiliated directly or through the appropriate County Nursing Association to the Queen's Institute of District Nursing and are under the supervision of the Institute. The district nurse is a familiar and welcome figure, particularly in country areas. In co-operation with the doctor she visits the patient's homes, tends the sick and the injured, and acts as adviser and educator in health matters. In many districts she acts also as midwife and health visitor by arrangement with the local authority. In all some 8,000 district nurses are at work over the whole of England and Wales.

The income of the associations is derived from subscriptions and donations, payments made by patients directly or through a contributory scheme, and grants from local authorities. The proportion received from public funds has increased in recent years, and especially since the Midwives Act 1936 placed on supervising authorities the duty of providing a domiciliary midwifery service. This duty is frequently discharged by the district nursing associations in return for a grant from the authority.

There is little doubt that, with some development, and with closer co-ordination with other branches of the health services, home nursing could play an even greater and more useful part. The need here is for extending and strengthening a service which has fully proved its value, and for linking it intimately with general medical practice and with hospital treatment.

The health of the school child.

For the school child, over the age of five, or from the time of his first attending school, there has gradually developed during the present century a special school medical service. Towards the end of the nineteenth century certain special provision was made for the care of blind, deaf, defective and epileptic children; but the origin of the school medical service may be traced directly to the Report of the Interdepartmental Committee on Physical Deterioration which was issued a few years after the South African War. As a result of this Report the Education (Administrative Provisions) Act was passed in 1907 setting up a regular system of medical inspection and empowering authorities to provide certain types of treatment. From then onwards, a system of increasing medical inspection and care of the health of the school child has been steadily built up. It is now based mainly on the provisions of the Education Act of 1921 and is one of the subjects falling within the scope of the Education Bill now before Parliament.

The operations of the present school medical service are broadly of three kinds. First, it provides for the regular medical inspection of all children in public elementary schools, in secondary schools, and in certain other schools. Second, it provides for the medical treatment, as well as inspection, of children in public elementary schools—but in regard to other schools there is no obligation (only a power) to provide treatment. Third, it enables the educational system, with its regular contact with parent and child, to influence both in principles of healthy child life, and to assist and guide them in securing that the child resorts to the kinds of medical treatment or care that it may need. The first and last of these functions are essentially aspects of the educational system, as such, and it is the second—personal medical treatment—that is of most interest for the purpose of the present review.

Responsibility for arranging this medical treatment rests with the local education authorities. There are at the moment, for elementary education, 315 of these, and they include counties and county boroughs and certain non-county boroughs and urban districts; for higher education, there are 146 of these, all counties and county boroughs. The present provision made by local education authorities for medical treatment varies considerably—in some areas dealing only with the treatment of teeth, eyes, ears, nose and throat, and minor ailments; in others extending to such matters as orthopaedic treatment and certain provision for rheumatic cases and for maladjusted children. The authorities are required to recover the cost of treatment from the parents, unless they are satisfied that this would not be reasonable. Some of the treatment activities are conducted in the schools themselves, some at clinics, provided for the purpose by the local education authorities, some by arrangements made between these authorities and hospitals or other independent agencies.

The local education authorities' organisation for these purposes includes school medical officers, whole time or part time, the chief of whom is in nearly all cases also the medical officer of health of the local authority concerned and combines his school functions with his general public health duties; it also includes school nurses, who are able to do much of the follow-up work in direct contact with the home and the parents (and who may combine their duties with those of a health visitor) and school dentists and other technical officers. A valuable activity of the education authorities, side by side with this medical work, is the provision of good school meals and extra nourishment. This has been greatly expanded since the beginning of the present war, is no longer limited (as it was in earlier days) to children whose parents are necessitous or who cannot readily get to their homes at mid-day, and will remain an important feature in the proposed educational reorganisation.

The central supervision of the school medical service rests with the Board of Education, under powers delegated by the Ministry of Health, and a close association of its work with general public health policy is assured by the two Departments enjoying the services of a single Chief Medical Officer, and by regular arrangements made through him for the co-ordination of the medical work at the centre in both fields.

Dental Services.

The existing publicly organised dental services are of several kinds, and apply to various classes or groups of the population.

Through the National Health Insurance scheme many—but not all—of the 21,000,000 persons insured under the scheme can get what is known as "dental benefit." In fact, nearly two-thirds of them, or some 30 per cent. of the population, are probably eligible for this benefit, which first began to be provided in 1921. It does not take the form of direct public provision of dental treatment, but of a money payment of the whole or a part of the approved cost of treatment. The individual obtains treatment for himself from any dentist who is willing to treat him, under certain conditions and at certain scales of fees which are centrally regulated by the scheme. Most dentists in private practice are willing to accept the "dental benefit" patient in this way, although there is no obligation to do so and no "panel" system comparable to that on the medical side of the Insurance Scheme. Whether

"dental benefit" is obtainable by any insured person, depends upon the ability of the Approved Society (or branch) to which he belongs to make payments for this benefit out of its surplus funds. Although probably about 13,000,000 people are eligible for this benefit, it is noteworthy that only some six or seven per cent. of them actually claim it in any given year.

Under the maternity and child welfare service most local welfare authorities arrange—in varying degree—for dental treatment for expectant and nursing mothers and, where necessary, for children under five. The majority do this by providing a service directly, at their welfare clinics (or at school clinics dealing with older children), others by arranging through private dentists or hospitals. The service includes the provision of dentures in the majority of cases. No charge is usually made for fillings or extractions, but for dentures most authorities recover what the mother can reasonably afford. This service dates back to the Maternity and Child Welfare Act of 1918, though its main development is more recent.

Dental treatment is also provided as part of the arrangements for the treatment of tuberculosis, by the county and county borough councils. Here the main object is to deal with cases where the state of the teeth prevents the full benefit of tuberculosis treatment (e.g., by interfering with nourishment) and, although this limitation is not too strictly observed, the arrangements are only an ancillary activity of the main tuberculosis service. The arrangements vary locally, being sometimes provided at the sanatoria themselves, sometimes at other centres by the dentists employed for the maternity and other services described, sometimes by private dentists.

In the schools the school medical services of the local education authorities provide dental inspection and treatment, in varying degree. School dental officers and dental attendants and other staff are appointed directly by the authorities. The work is done mainly in clinics or in certain country districts in the schools themselves. There is no statutory restriction on the scope or nature of the treatment which can be given—although it will be remembered that the school medical treatment service is at present a duty of the authorities only in the case of elementary schools, and a discretionary power in other cases. In actual fact, the dental service provided (every education authority has a dental scheme) varies within wide limits, dependent largely on the number of children who accept the offer of treatment, and although it does not (in the view of the Board of Education) represent anything like a fully adequate service for the school child it was before the war one of the most rapidly expanding branches of school medical work.

Apart from these publicly organised services the individual citizen must depend on his own private arrangements. He may have access to special dental hospitals (where these exist), or to some of the general hospitals where he will normally be asked to pay what he can reasonably afford, or he may use facilities which some business houses or industrial organisations provide for their employees, or some charitable or voluntary organisation in his neighbourhood. Otherwise he seeks treatment privately from a dental practitioner in the ordinary way; or if he is in serious financial need and requires urgent treatment he may seek the assistance of the poor law, which in most areas will arrange for essential treatment in the last resort.

Ophthalmic Services.

The position in regard to the public provision of ophthalmic services is very like that in regard to dental services. "Ophthalmic benefit" under the National Health Insurance scheme is the principal method of obtaining ophthalmic advice and treatment and spectacles, and about half the insured groups, or some 25 per cent. of the population, are eligible for benefit. There are two ways in which spectacles are obtained—either through a medical practitioner with special experience of ophthalmic work who normally gives a prescription for any necessary spectacles to be made by a dispensing optician, or through a sight-testing optician. The Approved Society (or branch) which provides ophthalmic benefit is required to pay the cost of ophthalmic treatment up to a maximum amount the cost of an authorised ophthalmic examination, and the whole or part of the cost of spectacles if they are needed.

Ophthalmic treatment is open to schoolchildren through the school medical service. Arrangements for this form of treatment, usually by specialists, are made by all education authorities. It is one of the most comprehensive of all branches of school medical work and provides a more comprehensive ophthalmic service than is available for any other section of the community. Apart from this service, only partial and irregular public facilities are available, for example through the out-patient departments of some special and general hospitals or through the poor law. Otherwise the citizen must rely on private arrangements.

Industrial Medical Services.

In addition to the services described there are various medical activities associated specially with industry and employment, which need to be mentioned although they are not primarily concerned with the personal medical advice and treatment of the individual but more with general welfare and the environmental conditions of his work. Although they can all be referred to loosely as "industrial medical services", they vary considerably in kind.

First, the Factory Acts provide for arrangements for factory inspection which include medical as well as other Inspectors. The history of the direct intervention by the State in industrial welfare and working conditions is a long one, and most of it is not relevant for the present purpose. Sufficient to say that it has its origin, well over a century ago, in the appointment after 1802 of factory "Visitors" by the Justices of the Peace (mainly to enforce the legal requirements affecting the employment of juvenile labour) and that this arrangement was superseded by the first Government inspectorate of factories after the Factory Act of 1833, from which the line of succession of the present system can be more or less directly traced. The first appointment of a medical inspector was not made until about the end of the 19th century; but the medical side of the factory inspectorate has since developed into an important and well-known arm of the service, and now occupies the whole-time services of more than a dozen medical inspectors. In addition, however, the Inspectorate has, for over 100 years, been assisted by part-time doctors (formerly called Certifying Surgeons, now Examining Surgeons, and now numbering about 1,700) whose duties included the investigation of cases of accident and industrial disease as well as investigating the physical suitability of juveniles for factory employment and periodically examining workers employed in various unhealthy processes—in connection with preventive measures (including, where found necessary, the suspension of individuals from the particular kind of work). Their investigation of accidents (but not of cases of disease, poisoning, gassing, and other special cases) was dropped in 1916, but the other sides of their work have been developing. This organisation is not designed to provide personal medical treatment and advice to the individual worker; it is designed as an integral part of the highly technical machinery for promoting, fundamentally through the employer, safety, health and welfare in factories and other premises within the scope of the Inspectorate.

Next, industrial concerns often appoint works medical officers, full-time or part-time, who are in a rather different position. An intermediate kind of case is where the firm arrange for the Examining Surgeon to carry out additional functions at the works, beyond those for which they are legally required to employ him, so that he is substantially a part-time works doctor. These "works doctors" are engaged mainly to keep an expert eye on the medical aspects of the factory's work and hygiene, on the effects of environment upon the health of the workers, on the wise adjustment of types of work to the workers' capacity, on arrangements for dealing with accidents and emergencies, and generally for the giving of proper medical advice to the factory management. Before the war, arrangements of this kind were often encouraged by the Factory Inspectorate, and the Factories Act of 1937 gave wider powers to the Home Secretary to order employers to make arrangements for medical supervision in their factories. Further, in 1940, the Minister of Labour and National Service made an Order, under Emergency Powers, requiring munitions and other firms to appoint works doctors if directed to do so. Formal directions under the

Order have not been found necessary; but, since it was made, many more firms have in fact appointed whole-time or part-time works doctors, so that there are now some 175 whole-time doctors of this kind and about 700 exercising substantial medical supervision in the factories on a regular part-time basis. The "works doctors" do not, any more than the Factory Inspectorate, exist primarily as a personal medical service; but in connection with their functions of advising the management and dealing with preventive and first-aid measures in the factory they often provide, incidentally and as a matter of common-sense utility, a certain amount of useful personal medical advice to the factory employees on the spot—perhaps particularly in war-time with its reduced opportunities for ordinary medical consultation outside working hours and its greater need for uninterrupted attendance at a place of work.

The Ministry of Supply, in its capacity of factory employer, has on similar principles developed a medical service in connection with its Royal Ordnance Factories. This service, as might be expected in a large industrial undertaking, includes a central organisation concerned with the general problems of the particular classes of factory under consideration, in which medical and other technical experts play their part, combined with a service of works doctors who look after conditions at the individual works in conjunction with other experts there, and who incidentally, as in other cases, give a certain amount of personal medical advice. Similarly, but on a smaller scale, the Air Ministry and Admiralty make arrangements for medical services at their civilian industrial establishments.

For the mining industry, the Ministry of Fuel and Power has found it increasingly desirable to enlist the medical expert in its national organisation dealing with working conditions and welfare in the industry, and it also encourages greater use in the mines themselves of medical advice on the "works doctor" principle. These activities also involve some entry into the field of personal medical care, but they do not set out to provide any full separate medical service. The miner, like other industrial workers, is within the scope of the National Health Insurance scheme and has recourse to hospital and other services on the basis already described. The Miners Welfare Commission has also been active in mining areas, in assisting in the provision of additional facilities (such as X-ray installations or physio-therapy centres at hospitals).

Generally, in these and other industrial medical services, the picture is not one of personal doctoring and individual health advice organised in vocational groups. It is not a question of separately organised medical treatment services for classes of industrial workers as distinct from the rest of the population. With few exceptions (like the arrangements for the police and for certain Post Office workers, referred to under the paragraphs on general medical attention above) the main health and treatment services, already summarised in this paper (National Health Insurance, the local authority services, the hospitals, and so on) apply in the main to the people or to sections of the people irrespective of their particular form of vocation or employment—for the most part equally to the worker in the field or in the mine or in the factory or elsewhere. The "industrial" medical services are primarily concerned with enlisting the medical expert in the supervision of general industrial welfare and organisation. They are not a direct personal treatment service, though to the extent indicated they are sometimes concerned incidentally with personal advice or limited treatment.

General.

This, then, is a broad outline of the picture of the health and medical services—the main picture, but not by any means the whole picture. A full review would have to detail the multitude of voluntary and private and semi-public efforts of a host of associations, trusts, societies, clinics, institutions and other organisations and groups, which have sprung from private initiative or from public charity over a long period of years. It would have to analyse the many local variations of both statutory and non-statutory services, the many different kinds of experiment in grouping and combination of services locally, the attempts made both recently and earlier, in different quarters, to relate separate services more closely to each other and to "rationalise" the pattern here and there. There is no room to deal with all this. The general picture given is perhaps enough to reveal the essential features of the present situation.

THE PRESENT HEALTH SERVICES IN SCOTLAND.

General.

The health services in Scotland had the same origin and their development has followed much the same course as the health services in England and Wales. There has been the same evolution from the measures taken by public authorities at the beginning of last century to relieve the destitute sick, followed later in the century by the development of the environmental public health services and the treatment of infectious diseases, to the expansion of the personal health services in the present century. There has been the same haphazard growth of these services through the years, leaving much the same gaps to be filled and the same kind of problems to be solved. This being so, a description of the history and the present state of the health services in Scotland would inevitably repeat much of what has already been said in this Appendix. But the development of the services in the two countries has not been uniform. Some of the Scottish services differ in their scope and organisation from the corresponding services in England and Wales; others, such as the Highlands and Islands Medical Service, have no English counterpart at all. The following paragraphs draw attention to the most important of these differences.

Local Authorities.

The Local Government (Scotland) Act, 1929, substantially reduced the number of local authorities concerned with the health of the people. The health services (excluding for this purpose the environmental services—general sanitation, water supply, drainage and housing) are now administered by the 55 "major health authorities," namely, the county councils, of which there are 31, and the town councils of large burghs, of which there are 24. A large burgh is one nominally with a population of over 20,000. The school health service, however, is administered only by the county councils and the town councils of the four Cities (Edinburgh, Glasgow, Aberdeen and Dundee), which are education authorities.

Hospital and Consultant Services.

In broad outline, the development of the hospital services in Scotland has been similar to that in England and Wales. The two hospital systems—voluntary and local authority—have grown up side by side in much the same way in both countries. But the voluntary hospitals in Scotland still provide much the bigger part of the institutional service for the treatment of acute medical and surgical conditions. Before the war there were some 220 voluntary hospitals with a total of over 14,000 beds. On the other hand, local authorities have entered the "general" hospital field only in recent years and so far have provided only some 5,500 beds in nine local authority general hospitals. With one small exception, these hospitals are found in the four Cities. There are still about 1,700 beds in public assistance institutions accommodating the "chronic sick" coming within the scope of the poor law.

The tradition of the Scottish voluntary hospitals is to afford free treatment. There has been very little development of the pay-bed system; and it is not customary to ask the patient in ordinary wards to make a payment towards the cost of his treatment. While there are organised schemes in offices, factories and work places, for collecting subscriptions for hospitals, little has been done to organise voluntary contributory schemes of the type found in England and Wales. Local authorities which have provided hospitals for the general sick apart from the poor law are obliged by statute to charge a reasonable sum towards the cost of the patient's treatment. But there is no power to charge for the hospital treatment of infectious disease. (Further reference is made below to infectious diseases hospitals and sanatoria.)

Between the wars, the re-organisation of the Scottish hospital services was widely discussed and a number of important committees reported on the subject. Considerable support has been given to the view that Scotland both requires and lends itself to a regional co-ordinated hospital service comprehending both the voluntary and local authority hospitals. This view takes account mainly of the fact that the country's key hospitals as well as the medical schools are all to be found in the four Cities of Edinburgh, Glasgow, Aberdeen and Dundee, and that

these centres are natural focal points for a regional organisation. The conception of four hospital regions based on these Cities, with a fifth based for geographical reasons on Inverness, has thus become the common currency of all discussions on Scottish hospital policy. The recently published report of the Hetherington Committee not only re-affirms this conception but makes definite proposals for setting up Regional Hospital Councils with primary advisory functions.

Scotland has for long suffered from an acute shortage of hospital accommodation and the waiting list problem has been serious. This gives special importance to the fact that the Emergency Hospital Service, organised originally for the treatment of air-raid casualties, has added some 15,000 new beds to the country's total hospital provision. Of these, 8,000 are in annexes at existing hospitals, and 7,000 are in seven completely new hospitals. While these beds are in buildings of emergency construction and while their number will be materially reduced to conform to peace-time standards of bed-spacing and the like, they will form a welcome addition to the post-war hospital service. The annexes are administered by the hospital authorities responsible for the parent hospitals to which they are attached: the seven new hospitals are directly administered by the Department of Health for Scotland.

Fortunately, little call has had to be made so far on the emergency hospital organisation for the treatment of air-raid casualties and beds have therefore been free, within the limits of the available nursing staff, for other purposes. For example, emergency beds have been used to great public advantage in relieving the waiting lists of the voluntary hospitals: up to the end of 1943, some 24,000 patients had been admitted for treatment from these lists.

The existence of staffed beds in the emergency hospitals under the Department's direct control with full consultant and diagnostic facilities available has also facilitated an interesting and successful experiment in preventive medicine, involving the close co-operation of the family doctor, consultant and hospital services. This was originally known as the Clyde Basin Experiment which had its origin in reports received from various sources towards the end of 1941 suggesting that war strain, long hours, and the black-out were affecting the health of the working population in Scotland, including that of young women who had entered industry for the first time. At the same time it was becoming clear that the man-power needs of the nation required the organisation of the civilian medical services on lines which would secure that early and correct diagnosis and treatment were available for any condition which threatened to impair the working capacity of war workers or to leave a war aftermath of chronic invalidism. Accordingly, early in 1942, the Secretary of State launched the experiment for the benefit of young industrial workers between 18 and 25 years of age, in the West of Scotland. Family doctors in the area were asked to refer to the Department's Regional Medical Officer patients in a debilitated state or showing symptoms suggesting the need for expert diagnosis. The experiment was successful from the start and by the end of the year it was extended to cover war workers of all ages in the whole of the industrial belt. It is now known as the Supplementary Medical Service Scheme. Under the scheme, the Regional Medical Officer, either himself or with the aid of consultants, makes a thorough examination of every case referred to him; a full range of consultants is available for the purpose. Where necessary, the Regional Medical Officer arranges for the patient's admission to hospital for observation and full clinical investigation or to a convalescent hospital if rest or "building up" is needed. Where on medical grounds a change of work seems desirable the Regional Medical Officer consults the Ministry of Labour and National Service. A full report is furnished to the family doctor in every case for his future guidance and, in selected cases, follow-up work is undertaken.

Up to the end of 1943, some 6,300 patients had been referred to the Regional Medical Officers for examination. The scheme has shown what can be done in bringing the family doctor into close and effective contact with the consultants and the hospitals—contacts which have evoked the warmest appreciation from doctors and patients alike.

Infectious Diseases Hospitals.

As in England and Wales, it was not until the middle of the nineteenth century that organised steps were first taken to deal with infectious diseases.

Glasgow's first municipal fever hospital was opened in 1865. Two years later the Public Health (Scotland) Act, 1867, empowered local authorities for the first time to make provision for the prevention and mitigation of epidemic, endemic or contagious diseases. These powers included one to provide hospitals for the sick generally but by the Public Health (Scotland) Act, 1897, this power was limited to the provision of hospitals for those suffering from infectious diseases.

This Act of 1897, which is still the principal Public Health statute applicable to Scotland, is the basis of the present system of public health administration. It made compulsorily notifiable throughout Scotland the diseases which previously had been notifiable only in the areas of local authorities which had adopted the Infectious Disease (Notification) Act, 1889, and it gave powers to the Central Department to require the notification of other diseases. Through the years the list of notifiable diseases has been considerably extended.

Many local authorities combined to discharge their duties under the Act of 1897 with regard to the treatment of infectious diseases. The Local Government (Scotland) Act, 1929, in reducing the number of local authorities responsible for this service to 55, consequentially reduced the number of hospital combinations. There are now 12 joint boards providing infectious diseases hospitals on behalf of 23 of the authorities. In all, there are 109 infectious diseases hospitals with about 7,600 beds, excluding beds for the treatment of tuberculosis. Sixty-six of the hospitals have less than 50 beds. The institutional treatment of infectious diseases in Scotland is entirely free.

Tuberculosis.

Responsibility for the treatment of tuberculosis in Scotland is included in the general responsibility for treating infectious diseases laid by the public health statutes on the 55 major health authorities. There is no separate statutory provision dealing with tuberculosis as in England and Wales and in particular there is no specific power to provide for the after-care of persons who have suffered from tuberculosis.

The main features of the tuberculosis schemes derive from the efforts of the late Sir Robert Philip who in 1887 laid in Edinburgh the foundation of an anti-tuberculosis organisation based on the association of the dispensary, the sanatorium and the farm colony. The higher techniques in the treatment of tuberculosis have been greatly developed since these early days, but the basic principles of this pioneering effort still hold good.

Local authorities were at first slow to follow Sir Robert Philip's lead. One or two of them in 1904 experimented with the isolation of pulmonary tuberculosis in spare wards of infectious diseases hospitals, but it was not until 1906 that substantial progress began to be made. In that year the Local Government Board for Scotland (at that time the central Department) made pulmonary tuberculosis compulsorily notifiable and extended to this disease the statutory obligation which already rested on local authorities to deal with certain other infectious diseases.

Before the war, there were about 5,300 tuberculosis beds in Scotland, of which about 4,700 were in local authority institutions. Although some of these beds were converted to other uses when war broke out, alternative arrangements including the provision of beds in the Department's emergency hospitals, have resulted in a net increase in the available bed accommodation.

The incidence of tuberculosis is relatively higher in Scotland than in England and Wales, and it has tended to increase in war-time. There are empty beds available for tuberculosis patients which cannot be used for lack of nurses. This has produced a lengthening waiting list of sufferers requiring institutional treatment, one of the distressing features of the present state of the public health.

Venereal Disease.

There are about 50 out-patient clinics and centres in Scotland for the treatment of venereal disease. Some are in voluntary hospitals but many have been specially provided.

Mental Health Services.

Provision for the care and treatment of persons suffering from mental disorder is made by local authorities under the Lunacy (Scotland) Acts, 1857 to 1919.

While these Acts make some provision for voluntary patients, no specific powers have been conferred on local authorities with regard either to voluntary patients or to out-patient diagnosis and treatment. There is indeed no counterpart in Scotland to the English Mental Treatment Act of 1930. Nevertheless, this part of the service has developed steadily in recent years. In 1942, 14.2 per cent. of the admissions to mental hospitals provided by local authorities were voluntary patients.

There are 23 local authority mental hospitals in Scotland, of which 13 serve combinations of two or more authorities. The 23 hospitals had 12,800 patients on 1st January, 1943. Four single authorities and two combinations have no mental hospitals of their own but depend on contracts made with the Royal Mental Hospitals (or Asylums).

There are seven Royal (or Chartered) Mental Asylums which originated under endowment schemes and are the oldest of the existing institutions for the insane in Scotland. On 1st January, 1943, they had 5,300 patients.

Provision for the care of mental defectives is made under the Mental Deficiency (Scotland) Acts, 1913 and 1940. As in England, the war of 1914-18 checked developments under the 1913 Act, and institutional provision is still very inadequate. On 1st January, 1943, there were 3,900 mental defectives in certified institutions and 1,750 under guardianship. Five of the 13 institutions are managed by joint boards or joint committees. One of the largest of the institutions and two small ones have been provided by organisations other than local authorities.

Central supervision of the lunacy and mental deficiency services is the responsibility of the General Board of Control for Scotland, the members of which are appointed by the Crown on the recommendation of the Secretary of State.

The Committee on Scottish Health Services pointed out the need for the revision and consolidation of the Scottish lunacy and mental deficiency laws, and this problem is now being considered by a Committee appointed for the purpose under the chairmanship of Lord Russell. The former Committee also emphasised that the outstanding need of the mental health service was for a co-ordinated movement to deal with early mental and nervous disorders. It is in this field that the service has been chiefly lacking.

Maternity and Child Welfare.

The local organisation of the maternity and child welfare service is the responsibility of the 55 major health authorities. There is no counterpart in Scotland to the minor authorities of England and Wales.

Local authorities had no statutory powers to undertake child welfare work till 1915, when they were empowered by the Notification of Births (Extension) Act to attend to the health of expectant and nursing mothers and of children under five years of age. At the end of 1919 schemes for this purpose were in operation in areas comprising 55 per cent. of the population: ten years later the percentage had risen to 94: and since the passing of the Local Government (Scotland) Act, 1929, the remaining 6 per cent. of the population has been covered.

The scope of the service is broadly similar in the two countries, resting as it does on the employment of doctors, midwives, health visitors and specialists, and on the apparatus of clinics, centres, nurseries, maternity hospitals and homes. But there is one noteworthy difference. The Maternity Services (Scotland) Act, 1937, created a domiciliary maternity service which differs from that in England and Wales in that, while the English service is based on the midwife alone, the Scottish service is based on the doctor-midwife combination. That is to say, under the Act of 1937 it is now a duty on every local authority in Scotland to make available to all women, who are to be confined at home and who apply for the service, the joint care throughout pregnancy, labour and the puerperium of a doctor and of a certified midwife, with the advice and help, so far as it is practicable to provide it, of an expert obstetrician at any time if the doctor thinks this necessary.

There are some 1,400 practising midwives in Scotland, including 90 whole-time employees of local authorities.

While the maternal and infant mortality rates have shown a big improvement over the years, the position in Scotland is still much less favourable than that in England and Wales. The recently published Report of the Orr Committee examines the problem of infant mortality in Scotland and, among other things, calls attention to the poor liaison between the hospitals, the family doctor and the child welfare service.

Home Nursing.

The Queen's Institute of District Nursing have 1,050 nurses operating in Scotland. The District Nurse plays an important part in many areas as health visitor and tuberculosis nurse under the local authority schemes. She has a special importance in the sparsely populated rural areas where clinic services are remote or non-existent. Under the Maternity Services (Scotland) Act, 1937, many of the authorities are dependent on the District Nurses for their midwife services. In respect of these various statutory services, the District Nursing Associations are subsidised by the local authorities concerned.

The Health of the School Child.

The first step taken in this field was the appointment in 1902 of the Royal Commission on Physical Training (Scotland) to inquire into the physical condition of school children. The Commission found that data on the subject hardly existed, but that army recruiting returns showed a disquieting proportion of unfit applicants for military service. After a medical examination of 1,200 children in Aberdeen and Edinburgh, the Commission recommended that school boards should undertake the medical inspection of school children and record the results. This finding was emphasised by the Interdepartmental Committee on Physical Deterioration in 1904. Four years later the Education (Scotland) Act, 1908, provided for the medical examination and supervision of all school children, and authorised school boards to employ doctors and nurses for the purpose.

This was followed by the passing of the Education (Scotland) Act, 1913, which empowered school boards to provide for the medical treatment of children of necessitous parents. More recently, the Education (Scotland) Act, 1942, in effect places a duty on education authorities to arrange for the medical treatment of any school child who is unable, for the lack of treatment, to take full advantage of the education provided.

As already indicated, the local authorities for school health administration are the 31 county councils and the town councils of the four cities of Glasgow, Edinburgh, Dundee and Aberdeen, which constitute the 35 education authorities of Scotland. Central responsibility rests with the Secretary of State who exercises his functions through the Department of Health for Scotland.

The Highlands and Islands (Medical Service) Scheme.

The Highlands and Islands area is the only part of Scotland—and for that matter the only part of the United Kingdom—in which an attempt has been made to organise a complete medical service available to all classes. The keystone of this structure is the Highlands and Islands Medical Service, a unique effort in co-operation between the State and doctors in private general practice, which has revolutionised medical provision in the area. A Sub-Committee of the Scottish Health Services Committee, reporting in 1936 on the suitability of the Service to the peculiar conditions of the Highlands and Islands, suggested that it might even provide a model on which to build the future medical service in Scotland as a whole. Now that the time is come to consider this larger issue the Highlands and Islands Medical Service is of special interest and worth examining.

The Medical Service was set up following the investigation of the Dewar Committee who reported in 1912 that on account of the sparseness of the population in some districts, its irregular distribution in others, the configuration of the country and the climatic conditions, medical attendance was uncertain for the people, exceptionally onerous or even hazardous for the doctor and generally inadequate. The Committee also reported that the straitened circumstances of the people precluded the adequate payment of doctors by fees alone. The result was the passing of the Highlands and Islands (Medical Service) Grant Act, 1913, which constituted the Highlands and Islands Medical Service Fund, annually replenished

by Parliament, for the purpose of providing and improving means for the prevention, treatment and alleviation of illness and suffering in the area. The Fund is administered by the Department of Health for Scotland.

The area covered by the operations of the Medical Service comprises the seven counties of Argyll, Caithness, Inverness (excluding the burgh of Inverness), Ross and Cromarty, Sutherland, Orkney and Zetland, and the Highland District of Perthshire. This area covers more than half the land surface of Scotland but contains less than one-fifteenth of the total population.

A single visit in the Highlands and Islands may involve a doctor in a journey of many miles lasting some hours. Fees which would adequately recompense the doctor in these circumstances would be beyond the means of all but a few of the population. The basis of the Medical Service, therefore, is that it should provide medical attendance to beneficiaries at uniform fees irrespective of the distance which the doctor may have to travel. This is secured by paying grants to the doctor to compensate him for his travelling and his time, in return for which he undertakes to attend to his patients at modified fees. This modified fee system applies to the families and dependants of insured persons, uninsured persons of the crofter and cottar classes, and others in like circumstances who could not otherwise pay for their medical attendance. These arrangements have led to an enormous increase in the number of visits paid to beneficiaries. Where the grant payable on the basis of mileage travelled would not provide the doctor with an adequate income, the payments out of the Fund are calculated with reference to the net income of the practice so as to provide the doctor with a reasonable living. This applies in 23 out of a total of 153 subsidised practices. The doctor's income is, of course, not derived wholly from the Fund. But what is received from this source is usually a substantial supplement to his other sources of income—National Health Insurance capitation fees, payments from the County Council for public appointments, and fees from private patients.

The Medical Service is provided in consultation with the County Councils in the area, but the contract takes the form of an agreement entered into directly between the doctor and the Department. On a vacancy arising in a single-doctor area the County Council advertises for a local medical officer to undertake public assistance, school inspection and tuberculosis work. The Department then consider whether they are prepared to enter into an agreement for Medical Service work with the doctor whom the County Council propose to appoint. In areas with more than one doctor, the new doctor may receive no public appointment and the Department conclude their agreement with him independently of the County Council. It is a condition of each agreement that the doctor uses a car for the purposes of his practice.

The Department do not exercise any detailed control over the doctor's services: there is no interference whatever with his professional practice. Medical officers on the Department's staff visit doctors in the area periodically to smooth out difficulties and to keep the Department generally in contact with the administration and development of the Service. This method of central administration, free from restrictive conditions and anything resembling vexatious control, has proved an outstanding success: it has satisfied the Department's reasonable requirements and is acceptable to the doctors.

Special arrangements are made to provide the doctors with holiday reliefs and with opportunities for post-graduate study. The Fund also assists in the building of doctor's houses and in the improvement of existing houses.

But the test of the Medical Service is primarily not what it does for the doctor—and it does much for him—but what it does for the patient. The answer here is clear. The "quite inadequate" general medical service, described by the Dewar Committee in 1912, is a thing of the past and in every district in the Highlands and Islands the services of a doctor are available on reasonable terms. And the doctors which the Medical Service attracts are generally of a better type than some that were to be found in the area before.

A similar improvement has been effected in the nursing service. This was lamentably deficient before 1912, partly because of the difficulties of travel in the area, and partly because voluntary effort did not suffice to maintain an adequate

service. Liberal grants are therefore made out of the Fund to district nursing associations towards the cost of employing district nurses, and providing them with houses and motor cars and cycles. There are now over 200 nurses at work throughout the area, nearly double the number working in 1914. Almost all are fully trained nurses, and all are certified midwives.

There have been developments beyond the primary essentials, medical and nursing. The Royal Infirmary, Inverness, has been largely rebuilt (the work being assisted by substantial grants from the Fund); and it now occupies a pre-eminent place in the hospital resources of the area. The Lewis Hospital at Stornoway has likewise benefited and, with its latest extensions, is able to provide a comprehensive service which obviates the transfer of many patients to mainland hospitals. Arrangements have been made with other hospitals for the employment of full-time qualified surgeons. Thus grants are paid towards the salaries of surgeons attached to hospitals at Lerwick, Kirkwall, Golspie, Fort William, Wick and Thurso. Additional subsidised services include a medical consultant at Inverness, a dental service for the people of Skye and part of the Outer Isles, a massage service for Caithness and Sutherland, a special service for the treatment of tuberculosis in Zetland, Lewis and South Uist, where the incidence of this disease is high, and an ambulance service. The air ambulance has now become a familiar feature of the service: patients, in urgent need of treatment, are flown to the Glasgow Infirmary from islands lying off the west coast.

The amount of grants paid out of the Highlands and Islands (Medical Service) Fund for the various services during the year ended 31st March, 1943, was just under £100,000.

APPENDIX B.

EARLIER DISCUSSIONS OF IMPROVED HEALTH SERVICES AND AN OUTLINE OF EVENTS LEADING UP TO THE PREPARATION OF THIS PAPER.

It was recognised very shortly after the inception of medical benefit under the National Health Insurance Scheme in 1913 that there was a strong case for supplementing the general practitioner service with a consultant service. Preparations for this were advanced at the outbreak of the 1914-18 war. The war put an end to further progress in the matter, but towards its end a series of discussions took place between the National Health Insurance Commissioners and leading members of the medical profession on the general subject of the extension of health services.

Shortly after the establishment of the Ministry of Health in 1919, a Consultative Council on Medical and Allied Services was appointed by the Minister under the chairmanship of Lord Dawson of Penn. This body was invited to consider and report on schemes "requisite for the systematised provision of such forms of medical and allied services as should, in the opinion of the Council, be available for the inhabitants of a given area".

Space does not permit describing in detail the recommendations made in the valuable report of this body which was published in 1920, but the general conception which its authors had in mind was that of a comprehensive scheme under which all forms of medical service would be made available, under suitable conditions, to the population at large. The report recommended the establishment of Health Authorities for local administration and it contemplated, as does the present Paper, the co-ordination of municipal and voluntary agencies as the basis of the scheme. It is worth noting that the Council justified their recommendations "because the organisation of medicine has become insufficient and because it fails to bring the advantages of medical knowledge adequately within reach of the people".

In the same year (1920) a Consultative Council on Medical and Allied Services appointed by the Scottish Board of Health under the chairmanship of Sir Donald MacAlister reported on a somewhat similar remit. Their report urged that "a complete and adequate medical service should be brought within the reach of every member of the community." They made a number of recommendations designed to ensure that the family doctor (on whom the organisation of the nation's health service should be based) would be provided with all supplementary

professional advice and assistance, and they proposed that the State insurance medical service should be extended to cover persons of the same economic level as insured persons and dependants of insured persons. These and their other proposals provided a basis for much of the later discussion on the requirements of a national health service.

In 1921 there was issued the report of the Voluntary Hospitals Committee under the Chairmanship of Lord Cave, which had been set up by the Minister of Health to consider the financial position of the voluntary hospitals. In addition to recommending an exchequer grant to meet the immediate needs of the hospitals, the Committee proposed the establishment of permanent machinery to co-ordinate the work and the finances of voluntary hospitals throughout the country. This machinery was to consist of a central Voluntary Hospitals Commission and of local Voluntary Hospitals Committees for county and county borough areas. The report of the Committee touched on many of the problems with which this Paper is concerned, though its scope was limited to recommendations affecting voluntary hospitals. The Government accepted the findings of the Committee to the extent of providing an exchequer grant for the voluntary hospitals of £500,000 (not £1,000,000 as the Committee had suggested), but the long-term proposals of the Committee for the establishment of co-ordinating machinery were not carried into effect.

Sixteen years later the position of the voluntary hospitals was again reviewed by a body established under the chairmanship of Lord Sankey by the British Hospitals Association, and known as the Voluntary Hospitals Commission. The report of this body, like that of its predecessor, proposed the establishment of central and local bodies with co-ordinating functions and recommended a system of exchequer grants in aid of the voluntary hospitals.

In 1936 the report of the Committee on Scottish Health Services—(the Cathcart Report)—was published. The Committee reviewed the whole of Scotland's health services, personal and environmental, and made many important recommendations within a national health policy for promoting the "fitness" of the people. The recommendations of the report assume throughout that the separate medical services must be integrated and that a co-ordinated medical service should be based, as far as possible, on the family doctor. The report is too comprehensive in scope to lend itself to brief quotation, but it is one of the most complete official surveys of the country's health services and health problems yet attempted. The recommendations of the Committee have already formed the basis of legislation in particular fields.

The latest official report on hospital problems is that recently issued by the Committee which, under the chairmanship of Sir Hector Hetherington, was appointed by the Secretary of State to advise on various post-war hospital problems in Scotland. This report contains detailed recommendations for the setting up of five Regional Hospital Advisory Councils in Scotland. It also makes various suggestions for improved co-operation between hospitals and deals at length with financial arrangements as affecting the future voluntary hospital system.

Other helpful contributions to the study of hospital problems have been made from time to time by many other bodies, including the British Hospitals Association, the King Edward's Hospital Fund for London, the Contributory Schemes Association and most recently the Nuffield Provincial Hospitals Trust which has combined theory with practice in its well-known enterprises in paving the way for greater local co-ordination in the hospital services.

Throughout the period between the two wars, the British Medical Association have been active in focusing the mind of the medical profession upon constructive proposals for the extension and development of the existing health services. In 1930, and again in 1938, they published comprehensive proposals for "A General Medical Service for the Nation", and in 1942 the Medical Planning Commission organised by the Association issued a draft Interim Report which offered for the consideration of the profession far-reaching suggestions for the improvement of the medical services of the community. Salient passages from this important document are quoted in the body of this Paper. Other publications in this field of

which mention should be made are a report issued by a professional group known as Medical Planning Research and representing for the most part the younger elements in the profession, a proposal for a National Health Service by the Society of Medical Officers of Health and a valuable and mainly factual report published by Political and Economic Planning (P.E.P.) in 1937. These publications, and many others too numerous to be mentioned, have been supplemented by copious discussion in the columns of the professional and the lay press.

It is not possible, within the limits of this document, to review all this field of political and professional literature, but it may be said in very general terms that the principles most frequently recurring in the presentation of plans for future developments are the following:—

(1) that there should be made available to every individual in the community whatever type of medical care and treatment he may need;

(2) that the scheme of services should be a fully integrated scheme and that in particular a much closer linking up between general practitioner services on the one hand and consultant and hospital services on the other ought to be achieved; and

(3) that for certain services, particularly the hospital service, larger areas of local administration are needed than those of any existing kind of local authorities.

It is against this background of constructive thinking and discussion during the last quarter of a century that the proposals in the present Paper have been prepared and are put forward.

The Government announced—in October, 1941—their intention to ensure, by means of a comprehensive hospital service, that appropriate hospital treatment should in future be readily available to everyone in need of it. The declared basis for this was to be a new duty upon major local authorities, in close co-operation with voluntary agencies working in the same field, to see that a full hospital service, of every necessary kind, was made universally available; it was expressly recognised that this would mean designing the service over areas larger than those of most of the existing local authorities and that the full use of the powerful resources of the voluntary hospitals, while putting their relations with the local authorities on a more regular footing, would be of the essence of the scheme. To pave the way a detailed and expert survey was started on the Minister of Health's behalf—partly conducted directly by the Ministry and partly organised for the Minister by the Nuffield Provincial Hospitals Trusts—of the hospital services already available in each area in England and Wales. This survey is now nearing its completion. So also is a similar survey in Scotland, instituted by the Secretary of State.

Then, more recently, the report of Sir William Beveridge having taken as one of the bases of its proposals the assumption that a comprehensive national health service, for all purposes and for all people, would be established, the Government announced in February, 1943, that they also accepted this assumption.

The Health Ministers thereupon approached the medical profession, the voluntary hospitals and the major local government authorities, from each of whom they wanted—on a proposal of this magnitude—to obtain all possible help and expert guidance from the outset. It was arranged with them that, for the first stage, they should appoint small groups of representatives of their own choice and that these groups should take part in general preliminary discussions.

The programme was that there would need to be three stages in the evolution of the Government's proposals.

There would be a first stage, in which a preliminary exchange of ideas would be conducted informally and confidentially and without commitment on either side—to enable the Ministers to get a general impression of the feeling of these representatives on some of the main issues involved and to help them to clear the ground.

This second stage would be one of public discussion in Parliament and elsewhere. It would be the stage at which everybody—the public generally, for

whom the service would be designed, the doctors and the hospitals and the local authorities and other organisations which would be concerned in it or affected by it, and those men and women (including doctors) who are now engaged in the Armed Forces—would be able to discuss what was proposed and to voice their opinions about it. To assist in this the Government would issue a White Paper which would serve as a focus for detailed discussion.

The third stage would then be one in which the Government would settle what exact proposals they would submit in legislative form for the decision of Parliament.

For the first stage the representative groups were duly formed. In England and Wales, for the medical profession the British Medical Association, in collaboration with the Royal Colleges, brought together a representative group of medical men and women. For the voluntary hospitals representatives of the British Hospitals Association and the King Edward's Hospital Fund for London, with representatives of the Nuffield Provincial Hospitals Trust joining as observers, together formed a group. For the major local government authorities the County Councils Association, the Association of Municipal Corporations and the London County Council combined to form the third group.

Separate arrangements were made by the Secretary of State for Scotland for discussions with representatives of the medical profession in Scotland, the Scottish local authority associations and the Scottish Branch of the British Hospitals Association. These separate discussions took account of Scottish experience and of geographical, administrative and other differences.

Discussions took place with each group on those aspects of a comprehensive service which most affected them. For the purpose of discussion the Ministers offered to each group—in memoranda and orally—a series of suggestions and ideas for them to consider. They made it clear throughout that they welcomed criticism and alternative suggestions and were not at any stage confronting any of the groups with a predetermined scheme. They received suggestions from the groups on many of the subjects involved, and discussion from the outset was on the frankest basis. Inevitably there was divergence of opinion on some of the issues involved, which each group approached from a different background of experience and opinion, but the discussions were useful as a preliminary sounding of the expert view.

The present White Paper does not purport to sum up the discussions which have taken place, or to reflect any agreement or represent any views reached in these discussions. That would be inconsistent with the terms on which the discussion were undertaken.

APPENDIX C.

POSSIBLE METHODS OF SECURING LOCAL ADMINISTRATION OVER LARGER AREAS THAN THOSE OF PRESENT LOCAL GOVERNMENT.

On the assumption that for certain aspects of the health service, particularly the hospital service, there is need for larger areas of local administration than exist for these purposes now, and that the body responsible for the administration must be representative of and answerable to the electors of the area, there are, broadly speaking, three possible courses:—

- (1) to establish a directly elected body for the sole purpose of administering these parts of the health service;
- (2) to establish a directly elected body for the purpose of administering a group of services including these parts of the health service;
- (3) to secure joint action by the councils of the existing counties and county boroughs which make up the proposed area of administration.

The creation of a directly elected local authority for some particular purpose would run counter to modern developments in local government, which have been towards replacing the system of special authorities for the administration of particular services (such as Boards of Guardians and School Boards) by the system of authorities covering a wide range of functions. But, apart from that

the process of electing a one-purpose authority operating over a fairly large area is not likely to arouse sufficient public interest to attract an adequate proportion of local voters to the poll. Moreover, the system—if generalised over all the social services locally administered—would create an impossible complexity of separate authorities for separate local administrative functions, each requiring separate local election, each operating over a different area, and each requiring separate arrangements for rating or precepting in order to obtain its local revenue.

An alternative suggestion, of establishing new local authorities over wider areas for a substantial group of local services, has been canvassed in recent years. For instance, a proposal for comprising in a single local administrative area the county of Northumberland, part of the county of Durham, and four county boroughs lying on either side of the Tyne, was made in the Majority Report of the Royal Commission on Local Government in the Tyneside Area (1937) and it was recommended that six of the major local government services—Public Health (Medical and Allied Services), Education, Public Assistance, Police, Fire Brigades, and Highways—should be administered by a body with jurisdiction over the whole of this area. Proposals of a similar kind have been made in various quarters since the outbreak of the present war.

An authority performing so many important functions would need to be directly elected. But its establishment would involve a major alteration of the structure of local government. It would deprive county councils of practically all their chief functions—if, indeed, the few minor functions left could be held to justify their continued existence at all; and it would so denude county borough councils of their powers as to leave them with functions in some respects less than those of the "minor authorities" of to-day. Recent publications of the various local government associations and other bodies have shown that there is a wide divergence of view as to the future pattern of local government. It is clear that this must be the subject of a comprehensive inquiry, which could not be instituted under present conditions or completed in a short time. Settlement of the machinery of the new health service cannot await the conclusions of such an inquiry and the passing of any consequent legislation.

The only practical course—pending a general review of local government—is to use the present machinery and the existing facilities for securing such combinations of authorities as may be necessary. This means the application (and possibly some adaptation) of the well-established practice of securing larger administrative units by joint action.

The advantages and disadvantages of administering particular services by combinations of local authorities organised as joint boards have often been argued. The members of the Tyneside Commission, referred to above, differed on the point, the majority regarding the joint board system as "undemocratic", the signatory of the minority report taking the opposite view and recommending the extension of the system as going a considerable way to meet the problems with which that area was faced. The general convenience of arrangements which make it possible to have an area of administration exactly appropriate to any particular service, and to set up an authority for that area, chosen by persons who are themselves direct representatives of the local electorate, cannot be denied. But it is true that the system, if completely generalised, would leave the constituent local authorities who choose the members of the boards with little to do beyond nominating those members, instead of administering services themselves.

Other objections are often advanced. It is said that joint boards tend to attract the more elderly and less effective members of the constituent councils, and that their efficiency is thereby diminished. This is a matter of impression. It may be that, even if it is true, it is due not to the nature of joint boards but to the subject matters with which they happen to deal. A joint board administering (say) an infectious diseases hospital or a sewage disposal system—although its activities may be not less essential to the public welfare—may well attract less interest than would be taken in housing or education, two subjects which excite the keenest interest among local administrators. In any case, this particular weakness of the joint board system, if it exists, is one for which the remedy lies in the hands of local authorities themselves.

Another common criticism is that the powerful weapon of precepting on constituent authorities for funds weakens a joint board's sense of financial responsibility; or—to put it another way—that the members of a joint board, being indirectly elected and therefore at two removes from the ratepayers, have not the same need to justify policy to their supporters as the members of a directly elected authority. There may be something in this, but it is a point which could be met; *e.g.*, by requiring the joint authority to submit to its constituent councils (at intervals of, say, one or two or three years) estimates of their proposed expenditure, for the approval of all—or of a specific majority—of those councils. Some means of removing deadlocks (probably by way of arbitral powers vested in the appropriate Minister) would be needed, unless a majority decision were to be binding. This device, coupled with a more regular habit among the constituent councils of examining, and if necessary debating, the annual and other reports of the joint board, would go a long way to preserve a proper relation of the board to its constituent councils and the electors.

It is also said that the joint board system is bad in that it separates the services entrusted to it from the rest of the main machinery of local government. So far as the health service is concerned, the answer is the practical one—that the need to settle areas of proper size and resources for certain aspects of the service is urgent, and that (temporarily at least) the joint board seems to be the only practicable means of doing this. There need be no question of ruling out any wider development of local government which may later emerge, as the need for new services and extensions of existing services reveals itself. But that is a matter of long-term policy, for which the establishment of a comprehensive health service cannot be delayed.

APPENDIX D.

REMUNERATION OF GENERAL PRACTITIONERS.

The National Insurance Act of 1911 did not itself lay down any method by which the doctors taking part in the service were to be remunerated, nor did it fix the amount of the remuneration. The former has from the outset been prescribed by regulation, the latter negotiated between the Government and the profession or on some occasions determined by arbitration. For the former, the Medical Benefit Regulations have from the start envisaged two systems—one by way of a capitation fee for each person for whom the doctor had accepted responsibility, and the other by way of fees for services actually rendered. Provision is made for combinations and variants of these two systems, but with certain minor exceptions the capitation fee quickly became universal, chiefly owing to the difficulty of checking over-attendance under the other system.

So long as payments for insurance work remained a part only—and in many cases not the major part—of a doctor's professional income, it was difficult to find any rational criterion on which to arrive at an appropriate capitation fee other than by reference to previous fees—*i.e.*, by the limited method of deciding whether any events occurring since the previous fee was fixed were such as to justify its further alteration. It is well known that the original sum fixed in 1912 had regard to the practice of Friendly Societies and Medical Clubs, and that all subsequent sums have been built up from that basis. But it must be expected that in future the bulk of general practitioners will look to the new service for the whole, or substantially the whole, of their professional earnings. Hence, whatever methods of payment are adopted—whether by capitation fees, by salary, or in some other way—the substantial question at issue must be seen in a new light. It must be seen as the question of what is on ordinary professional standards a reasonable and proper remuneration for the whole-time services of a general practitioner working in a public service. Whether this should be worked out in terms of gross or net earnings, whether superannuation rights are to be assumed and taken into account, what adjustments are to be made for part-time work, are matters of comparative detail. When once the main figures have been satisfactorily settled, not only remuneration by capitation fee but remuneration under the salaried or part-salaried systems could be easily determined.

As the White Paper makes clear, the Government do not contemplate the introduction of a universal salaried system, but they propose that doctors taking part in the public service should be remunerated on a basis of salaries or the equivalent in any part of the service in which this form of payment is necessary to efficiency. They contemplate also that it may be possible in certain other cases to offer remuneration by salary where the individual doctors concerned would prefer such an arrangement. In any event, whether payment is on a salaried or part-salaried system or on a basis of capitation fees, two principles will have to be observed in the arrangements made. First, the doctors taking part in the scheme must be assured of an adequate and appropriate income. Second, the aim must be to achieve a system flexible enough to allow for proper variations attributable to extra qualifications and extra energy and interest, as well as representing the reasonable and normal expectations of general practice at all its stages.

The Government fully recognise the importance, and the urgency from a professional point of view, of reaching an understanding on these crucial matters, and they will be ready to discuss them in detail with the profession's representatives.

APPENDIX E.

FINANCE OF THE NEW SERVICE.

ENGLAND AND WALES.

Financial questions were included in the discussions held with the interested bodies before the present White Paper was issued, and are referred to in various places in the Paper. This Appendix sets out the general lines on which the Government think that a reasonable financial basis could be found for the scheme outlined in the Paper, and covers the suggested financial responsibility of the main agencies involved. This basis is suggested as being appropriate to the early years of the scheme. When once the service is well established some simpler basis unrelated to the expenditure of individual authorities may be considered. Further it will be appreciated that any estimates of cost made at the moment can only be conjectural, and it will not be possible to make better estimates until the new scheme is nearing its final shape, and the necessary discussions and negotiations with the interested parties have made progress.

Responsibilities of Local Authorities.

The scheme outlined in the White Paper contemplates that a new joint authority will be responsible for the hospital and consultant services. The new authority will also have the duty of preparing and submitting to the Minister a plan for the whole health service of its area and it is proposed that this plan, taking all the local circumstances into account, should determine precisely how responsibility for the remaining services should be allocated. It is proposed, however, that child welfare responsibilities should always be entrusted to the authority which is also the local education authority, the precise arrangements to be made being governed by the provisions of the current Education Bill as finally approved by Parliament. The intention as regards other local services is that those which are essentially consultant services and thus closely linked with hospital administration should be the responsibility of the new joint authorities, and those which belong more to the sphere of general health care should be the responsibility of county and county borough councils.

The principal new health services which will have to be set up if the White Paper scheme is adopted are home nursing, the provision of Health Centres and new dental and ophthalmic services. In the case of these new services, as in the case of existing services, there will be need for flexibility and it is contemplated that the final allocation of responsibility will be a matter for the area plan. It is assumed, however, that ordinarily responsibility for the provision of Health Centres and for the home nursing service will be assigned to county and county borough councils. But no assumption can be made regarding the other two services. The shape of the new dental and ophthalmic services cannot be foreseen until the report of the Teviot Committee on the former has been received and

discussions on both have taken place with the interests concerned. It is consequently impossible to say at this stage whether the whole or a part of these two services will be administered by local authorities or, if so, which authorities should be made responsible for them.

For the purpose of framing an estimate of the cost of the new health service as a whole however, it is immaterial to know precisely how responsibility for different parts of the service will be allocated among the various local authorities or to a central organisation. The hypothesis on which the figures given below are based must not therefore be read to imply that decisions have been taken on any questions of allocation of responsibility which are left open in the White Paper. The hypothesis selected as convenient for presenting the figures is that the new joint authorities will be responsible for the hospital and consultant service, tuberculosis dispensaries and mental clinics, and the county and county borough councils will be responsible for the provision of Health Centres and for the other existing local services, for the new home nursing service and, if the new dental and ophthalmic services are, in fact, entrusted wholly to local authorities, for these two services as well.

The New Joint Authority.

The scheme outlined in the White Paper contemplates that the new joint authority will take over all hospitals at present provided by rate-payers, including infectious diseases hospitals and mental hospitals* and will make arrangements with voluntary hospitals for the treatment of patients. They will also take over any tuberculosis dispensaries and mental clinics. Suitable financial adjustments will be made between the joint authority and the local authorities in respect of capital assets and liabilities taken over. A new service for which the joint authorities will be responsible is the provision of consultants (based on hospitals). In addition, they will need administrative and technical staff in the exercise of their duty of co-ordinating all the health activities of their area.

The total annual expenditure of all the new joint authorities will be very considerable. For example, in 1938-39 the cost to the existing local authorities of the services to be transferred was:—

	£ millions.
Mental Hospitals	12.3
Infectious Diseases Hospitals	4.2
Other Hospitals and Institutions	14.6
Tuberculosis Services	4.6
	35.7

There was no direct exchequer grant in aid of this expenditure, but there was indirect assistance to the rate-payers through the operation of the block grant to local authorities under the Local Government Act, 1929.

After the war the 1938-39 cost will be considerably increased. There will be some expansion of accommodation and services provided (e.g. for cancer), prices in general will be higher, and nurses' salaries have been increased substantially. In addition the joint authorities will be put to expense in connection with the arrangements to be made with voluntary hospitals, and in providing for the consultant service based on their own and on the voluntary hospitals. In these circumstances the cost to the joint authorities of these services in the years immediately after the war and of their general administrative expenses may approach £70 millions.

As regards the existing services, although there is no direct exchequer grant at present (except for cancer treatment, on which only a small amount was spent before or during the war by local authorities), the Government think that there should be a grant based on the number of hospital beds provided under the scheme. This grant would be substantial and would help to meet the cost of

* The term mental hospital is used in this appendix to include also mental deficiency institutions.

providing the consultant service based on hospitals. The grant for cancer treatment would be discontinued, as would the temporary war-time grant in respect of increases in the salaries of nurses, midwives, etc. In the case of the other new services a 50 per cent. grant is proposed.

For the purposes of this appendix the grant per bed has been taken as £100 per annum in the case of all hospitals other than mental hospitals and infectious disease hospitals and £35 per annum in the case of mental and infectious disease hospitals. A lower grant in the case of beds in these latter hospitals is justified not only on the ground of comparative cost of treatment and maintenance, but because the new scheme broadly does not impose any additional duties on local authorities in respect of treatment. The number of mental hospital beds has been taken as 170,000, of infectious disease hospitals as 40,000 and of other municipal hospital beds as 210,000.

On the above assumptions, the new joint authorities would spend about £70 millions a year. They would receive direct exchequer grants of £6 millions in respect of mental hospitals, £1.4 millions in respect of infectious disease hospitals and £21 millions in respect of other hospitals, a total of £28.4 millions.

The balance of cost—on these assumptions £41.6 millions—would be raised by means of precept on the constituent counties and county boroughs in the area of the joint authority, who would levy a rate for it. The rate-payers would accordingly have to find this £41.6 millions as against the £35.7 millions they had to find in 1938-39. The Government propose that this increased rate demand should be mitigated by an exchequer grant, as explained in the paragraphs which follow dealing with counties and county boroughs.

Counties and County Boroughs.

As already indicated, this financial appendix is based on the hypothesis that county and county borough councils will remain responsible for clinic services other than tuberculosis dispensaries and mental clinics, the major ones being maternity and child welfare and venereal disease, and will continue to be the responsible authority under the Midwives Act. In addition, it is assumed that they will provide and maintain Health Centres and will administer the home nursing service.

Taking figures of cost for 1938-39, the total expenditure on the services proposed to be transferred to the new joint authorities was £35.7 millions and that on the remaining services was £4.6 millions. Included in this latter figure was the balance of expenditure under the Midwives Act, after taking account of a grant of £.6 million.

The cost of these services will be greater after the war, owing to increased prices generally, to the cessation of fees charged for the attendance of midwives and the increased salaries of midwives and to any necessary expansions. It is proposed that there should continue to be a 50 per cent. grant towards the cost of the midwives service, and with the increased cost the grant may well amount to £1.5 million a year.

In the early years after the war £1 million per annum may be spent on home nursing, though it is difficult to forecast the cost of this service. The Government contemplate a 50 per cent. grant.

The cost of the provision and maintenance of Health Centres is difficult to forecast at the moment. Excluding the remuneration of doctors in the Centres the running costs (loan charges, heating, staff, etc.) of the Centres established during the first year or two would probably not exceed £1 million a year. The Government propose a 50 per cent. grant for this new service.

It will take some time to establish the new dental and ophthalmic services, and it will probably be several years before the net expenditure on the services reaches £10 millions on the former and £1 million on the latter. The Government propose a 50 per cent. grant towards these new services if responsibility for them is placed on counties and county borough councils.

Taking these figures, the total direct expenditure of counties and county boroughs on health services might amount to about £22 millions, towards which

there would be a direct exchequer grant of £8 millions. (Indirect assistance is, of course, also given by the block grant under the Local Government Act, 1929.)

The total amounts falling on the rate-payers would be £41.6 millions under precept from the joint authorities and £14 millions direct expenditure, a total of £55.6 millions. This compares with the figure for these services in 1938-39 of £40.3 millions. The Government would propose that any increased rate demand of this sort should be mitigated by an exchequer grant amounting in total to about 50 per cent. of the increase in any year over the demand in some fixed year taken as standard. If 1938-39 were the standard year, then on the figures given the grant in aid of rates would be about £7.6 millions. The grant would be paid to each county or county borough as a proportion of its increased rate-burden, the proportion being higher for poor areas than for rich, on general block grant principles.

Voluntary Hospitals.

Before the war there were no exchequer grants to voluntary hospitals in respect of their expenditure on the treatment and maintenance of patients. Their income was derived as to about half from payments by patients, either direct or through contributory schemes, and as to the rest mainly from voluntary gifts and legacies and income from investments. During the war they have received payments from the exchequer for work done in connection with the Emergency Hospital Scheme and are at present receiving an exchequer grant towards the cost of increased nurses' salaries based on 50 per cent. of the additional cost they incur under that head.

The White Paper explains the part which it is suggested that the voluntary hospitals should play in the new health scheme. Each voluntary hospital which makes arrangements with the new joint authority for the maintenance and treatment of patients under the general conditions of the scheme will have part of the cost paid to them by the authority. This may take the form of a standard sum per occupied bed per week, varying only with the type of hospital concerned.

In addition, in connection with the arrangements of the joint authority for the provision of consultants agreed sums may be contributed in aid of salaries, etc.

The war-time grant in respect of increases in salaries of nurses, midwives, etc., will cease, but the Government propose a new grant in respect of each bed in a voluntary hospital which, under arrangements made with the joint authority, is used or kept available for patients in the scheme. Outside the arrangements of the scheme, a voluntary hospital will, of course, be free to provide such "private pay-beds" as it thinks fit. Assuming that this grant will be the same as was taken for beds in municipal hospitals, i.e., £100 per annum, and that the total number of beds included in arrangements with joint authorities may possibly amount to 100,000, the exchequer grant would amount to £10 millions. This sum, together with the payments by joint authorities towards the cost of maintenance and treatment of patients, would not cover the whole cost to the voluntary hospitals, which would still be dependent on voluntary resources for a substantial part of the income necessary to balance their expenditure.

The General Practitioner Service.

It is clearly not possible at present to give any but the roughest estimates of the probable cost of the general practitioner service under the new scheme. In 1938, in respect of 17,800,000 insured persons under the National Health Insurance scheme, 17,164 general practitioners as a whole received £8.4 millions, while in the same year £2.4 millions was paid to chemists for fees and drugs in dispensing prescriptions.

For the purposes of this Appendix it is assumed that the cost of the extended service would amount to £30 millions a year for doctors and chemists together.

No account is taken of the cost of any superannuation scheme which may be introduced or of the cost of compensation in those cases where it is applicable.

Total Annual Cost of the Scheme.

On the basis of the rough estimates given in the preceding paragraphs the following table shows the total annual cost of the scheme to public funds and the proportions in which that cost might be borne by the ratepayers and by central funds.

Service.	Cost met from central funds.			Cost falling on rate-payers.	Total cost to public funds.
	(a) by direct grants or payments.	(b) by grants in aid of rates or precepts.	Total cost from central funds.		
	£m.	£m.	£m.	£m.	£m.
Expenditure of new joint authorities	28.4	—	28.4	41.6	70
Exchequer grant to voluntary hospitals	10	—	10	—	10
Expenditure of county and county borough councils ...	8	7.6	15.6	6.4	22
Fees to general practitioners and payments to chemists...	30	—	30	—	30
All services	76.4	7.6	84.0	48.0	132.0

How far the central funds will consist of, or be assisted by, sums of money set aside out of contributions under a social insurance scheme will fall to be considered later. The Beveridge Report proposed that a sum of £40 millions per annum should be available for the new health services. Of this £35.7 millions would be the share appropriate to England and Wales, and if this assistance is assumed the proportions in which the total cost of the new service would fall on the social insurance scheme, the taxpayer and the ratepayer would be, on the foregoing estimates and ignoring the effect of the block grant under the Local Government Act, 1929:—

Social Insurance Scheme	£35.7 millions, or about 27	per cent.
Taxpayer	48.3	" " 36.6 "
Ratepayer	48	" " 36.4 "
	£132.0	" "

Again ignoring the effect of the block grant, the corresponding table for the incomplete services in 1938-39 would be approximately:—

Contributions under N.H.J. Acts	£m.	11.2 or about 20	per cent.
Taxpayer	3.0	" " 6	" "
Ratepayer	40.3	" " 74	" "
	54.5		

FINANCE IN SCOTLAND.

As explained in the White Paper, certain differences are necessary in the administrative arrangements and reorganisation of the new health service in Scotland, as compared with England and Wales. With one material exception, however, the financial arrangements will be on broadly similar lines in the two countries. That exception concerns the provision, equipment and maintenance of Health Centres, which in England and Wales are likely to be a local responsibility and in Scotland the responsibility of the central authority. This being so, the whole cost of establishing these Centres in Scotland will be met from the exchequer, and the precise adjustments to be made in the grants payable to local authorities under the new scheme to take account of this difference will be a matter for discussion with these authorities.

On the basis of the best information available to the Department of Health for Scotland, the following table gives a rough estimate of the total annual cost of the scheme in Scotland and its approximate allocation between the rate-payers and central funds.

Service.	Cost met from central funds.			Cost falling on rate-payers.	Total cost to public funds.
	(a) by direct grants or payments.	(b) by grants in aid of rates or precepts.	Total cost from central funds.		
	£m.	£m.	£m.	£m.	£m.
Expenditure of new Joint Hospitals Boards	3.4	—	3.4	4.6	8.0
Exchequer grant to voluntary hospitals	1.6	—	1.6	—	1.6
Expenditure of county and large burgh councils	1.0	1.0	2.0	.8	2.8
Fees to general practitioners and payments to chemists...	3.2	—	3.2	—	3.2
Health Centres	.2	—	.2	—	.2
All services	9.4	1.0	10.4	5.4	15.8

If it is assumed that Scotland's share of any sum set aside out of contributions, under a social insurance scheme be £4.3 millions (corresponding to the figure of £35.7 millions for England and Wales) the total cost of the new service would fall on the social insurance scheme, the taxpayer and the ratepayer in the following proportions:—

Social Insurance Scheme	£4.3 millions or about 27 per cent.			
Taxpayer	£6.1	"	"	39 "
Ratepayer	£5.4	"	"	34 "
	£11.5	"	"	

As the expenditure borne on the rates in 1938-39 was roughly £4.4 millions, the net additional contribution from the rates would be £1 million.



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